

## LLNL Livermore Site First Quarter 2011 Self-Monitoring Report

The following is the first quarter 2011 self-monitoring data for the treatment facilities and Lake Haussmann at the Lawrence Livermore National Laboratory (LLNL) Livermore Site.

The volumes of ground water and soil vapor treated, and volatile organic compound (VOC) mass removed during the first quarter of 2011 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents results of ground water treatment facility and extraction well (ground water and soil vapor) VOC, chromium, bioassay, turbidity and chloride analyses (Tables A-1 through A-5). Metals and radiological analyses are presented in Tables A-6 and A-7, respectively. During the first quarter of 2011, all effluent sample analytical results were within acceptable discharge limits.

Self-monitoring reports for all treatment facilities including TFD-HPD *in situ* bioremediation (ISB01) reports are presented in Attachment B. TFD-HPD ground water and soil vapor treatment facilities PTU10 and VES07 operations are on hold during the bioremediation treatability test. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes. Monitoring data for Lake Haussmann are presented in Attachment C.

A map showing Livermore Site treatment areas and treatment facility locations, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B, 2, 3A, 3B, 4, and 5, are presented in Attachment D. The contour maps for the individual HSUs are based on data collected during the first quarter of 2011.

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**Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, January through March 2011.**

<b>Treatment Area<sup>a</sup></b>	<b>Month</b>	<b>Volume of ground water extracted (Kgal)<sup>b</sup></b>	<b>Volume of vapor extracted (Kft<sup>3</sup>)<sup>b</sup></b>
<b>TFA</b>	<b>January</b>	<b>12,202</b>	<b>-</b>
	<b>February</b>	<b>8,529</b>	<b>-</b>
	<b>March</b>	<b>6,666</b>	<b>-</b>
<b>TFB</b>	<b>January</b>	<b>2,799</b>	<b>-</b>
	<b>February</b>	<b>2,192</b>	<b>-</b>
	<b>March</b>	<b>2,279</b>	<b>-</b>
<b>TFC</b>	<b>January</b>	<b>2,918</b>	<b>-</b>
	<b>February</b>	<b>3,389</b>	<b>-</b>
	<b>March</b>	<b>3,787</b>	<b>-</b>
<b>TFD</b>	<b>January</b>	<b>6,856</b>	<b>1,299</b>
	<b>February</b>	<b>6,020</b>	<b>1,046</b>
	<b>March</b>	<b>6,533</b>	<b>1,510</b>
<b>TFE</b>	<b>January</b>	<b>2,141</b>	<b>11</b>
	<b>February</b>	<b>1,704</b>	<b>317</b>
	<b>March</b>	<b>1,977</b>	<b>1,046</b>
<b>TFG</b>	<b>January</b>	<b>764</b>	<b>-</b>
	<b>February</b>	<b>639</b>	<b>-</b>
	<b>March</b>	<b>640</b>	<b>-</b>
<b>TFH</b>	<b>January</b>	<b>1,008</b>	<b>1,931</b>
	<b>February</b>	<b>817</b>	<b>1,820</b>
	<b>March</b>	<b>833</b>	<b>1,938</b>
<b>TOTAL<sup>c</sup></b>		<b>74,693</b>	<b>10,918</b>

<sup>a</sup> Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E, TFA-W

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS, VTFD-HS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF518-PZ, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFF started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

<sup>b</sup> Totals are derived from individual extraction wells shown in Attachment B.

<sup>c</sup> Rounded number.

Kft<sup>3</sup> = thousands of cubic feet.

Kgal = thousands of gallons.

**Table 2. VOC mass removed at the Livermore Site, January through March 2011.**

<b>Treatment Area<sup>a</sup></b>	<b>VOC mass removed from ground water (kg)</b>	<b>VOC mass removed from soil vapor (kg)</b>	<b>Total VOC mass removed (kg) <sup>b</sup></b>
<b>TFA</b>	<b>1.2</b>	<b>-</b>	<b>1.2</b>
<b>TFB</b>	<b>0.7</b>	<b>-</b>	<b>0.7</b>
<b>TFC</b>	<b>1.2</b>	<b>-</b>	<b>1.2</b>
<b>TFD</b>	<b>9.5</b>	<b>0.9</b>	<b>10.4</b>
<b>TFE</b>	<b>2.2</b>	<b>0.5</b>	<b>2.7</b>
<b>TFG</b>	<b>0.2</b>	<b>-</b>	<b>0.2</b>
<b>TFH</b>	<b>0.9</b>	<b>7.4</b>	<b>8.3</b>
<b>TOTAL<sup>b</sup></b>	<b>15.9</b>	<b>8.8</b>	<b>24.7</b>

**Table 3. Historical summary of volumes of water and soil vapor removed at the Livermore Site through March 2011.**

<b>Treatment Area<sup>a</sup></b>	<b>Volume of ground water extracted (Mgal)</b>	<b>Volume of vapor extracted (Kft<sup>3</sup>)</b>
<b>TFA</b>	<b>1,769</b>	<b>-</b>
<b>TFB</b>	<b>421</b>	<b>-</b>
<b>TFC</b>	<b>445</b>	<b>-</b>
<b>TFD</b>	<b>949</b>	<b>82,936</b>
<b>TFE</b>	<b>349</b>	<b>147,731</b>
<b>TFG</b>	<b>74</b>	<b>-</b>
<b>TFH</b>	<b>153</b>	<b>212,816</b>
<b>TOTAL<sup>b</sup></b>	<b>4,160</b>	<b>443,483</b>

**Table 4. Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through March 2011.**

<b>Treatment Area<sup>a</sup></b>	<b>VOC mass removed from ground water (kg)</b>	<b>VOC mass removed from soil vapor (kg)</b>	<b>Total VOC mass removed (kg) <sup>b</sup></b>
<b>TFA</b>	<b>203</b>	<b>-</b>	<b>203</b>
<b>TFB</b>	<b>78</b>	<b>-</b>	<b>78</b>
<b>TFC</b>	<b>99</b>	<b>-</b>	<b>99</b>
<b>TFD</b>	<b>820</b>	<b>91</b>	<b>911</b>
<b>TFE</b>	<b>210</b>	<b>146</b>	<b>356</b>
<b>TFG</b>	<b>11</b>	<b>-</b>	<b>11</b>
<b>TFH</b>	<b>35</b>	<b>1,209</b>	<b>1,244</b>
<b>TOTAL<sup>b</sup></b>	<b>1,456</b>	<b>1,446</b>	<b>2,902</b>

<sup>a</sup> Refer to Table 1 footnote for facilities in each treatment facility area.<sup>b</sup> Rounded number.

Abbreviations for Tables 2, 3 and 4:

Kft<sup>3</sup> = thousands of cubic feet.

Kg = Kilograms.

Mgal = millions of gallons.

VOC = Volatile organic compound.

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**Attachment A**

**VOC, Chromium, Bioassay,  
Turbidity, Chloride, Metals, and  
Radiological Analyses**

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Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFA</b>													
TFA-I001	05-JAN-11	E624	<1	<1	<1	<1	<b>1</b>	<1	<1	<b>7.5</b>	<1	<b>0.71</b>	<1
TFA-I001	04-FEB-11	E601	<0.5	<b>1</b>	<b>1</b>	<0.5	<b>1.5</b>	<1	<0.5	<b>6.5</b>	<0.5	<b>0.71</b>	<0.5
TFA-I001	01-MAR-11	E601	<0.5	<b>0.96</b>	<b>0.94</b>	<0.5	<b>1.4</b>	<1	<0.5	<b>6.7</b>	<0.5	<b>0.68</b>	<0.5
<b>TFA-E</b>													
TFA-E001	05-JAN-11	E624	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1
TFA-E001	04-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFA-E</b>													
W-254	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<b>0.64</b>	<1	<0.5	<b>46</b>	<0.5	<b>1.4</b>	<0.5
STU06-I	04-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<b>0.71</b>	<1	<0.5	<b>38</b>	<0.5	<b>1.2</b>	<0.5
STU06-I	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<b>0.69</b>	<1	<0.5	<b>38</b>	<0.5	<b>1.2</b>	<0.5
<b>TFA-E</b>													
STU06-E	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	04-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFA-W<sup>a</sup></b>													
W-404	12-JAN-11	E601	<0.5	<0.5	<b>1.6</b>	<0.5	<b>2.7</b>	<1	<0.5	<b>11</b>	<0.5	<b>0.55</b>	<0.5
W-404	23-FEB-11	E601	<0.5	<0.5	<b>1.4</b>	<0.5	<b>2.2</b>	<1	<0.5	<b>9.8</b>	<0.5	<0.5	<0.5
W-404	16-MAR-11	E601	<0.5	<0.5	<b>1.4</b>	<0.5	<b>2.2</b>	<1	<0.5	<b>9.2</b>	<0.5	<0.5	<0.5
TFA-W-E	12-JAN-11	E624	<1	<1	<b>1.6</b>	<b>1.2</b>	<b>3</b>	<1	<1	<b>12</b>	<1	<b>0.52</b>	<1
<b>TFB</b>													
TFB-I002	05-JAN-11	E601	<0.5	<b>2.3</b>	<0.5	<0.5	<b>1.8</b>	<1	<b>3.8</b>	<b>1.4</b>	<0.5	<b>11</b>	<0.5
TFB-I002	07-FEB-11	E601	<0.5	<b>2.3</b>	<0.5	<0.5	<b>1.6</b>	<1	<b>3.5</b>	<b>1.4</b>	<0.5	<b>11</b>	<0.5
TFB-I002	01-MAR-11	E601	<0.5	<b>2.2</b>	<0.5	<0.5	<b>1.5</b>	<1	<b>3.6</b>	<b>1.4</b>	<0.5	<b>11</b>	<0.5
<b>TFB-E</b>													
TFB-E002	05-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	07-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC</b>													
TFC-I003	11-JAN-11	E601	<0.5	<b>0.54</b>	<0.5	<0.5	<0.5	<1	<b>1.8</b>	<b>3.2</b>	<0.5	<b>6.5</b>	<0.5
TFC-I003	07-FEB-11	E601	<0.5	<b>1.1</b>	<0.5	<0.5	<b>0.77</b>	<1	<b>11</b>	<b>2.4</b>	<0.5	<b>9.1</b>	<0.5
TFC-I003	03-MAR-11	E601	<0.5	<b>0.96</b>	<0.5	<0.5	<b>0.71</b>	<1	<b>9.2</b>	<b>2.3</b>	<0.5	<b>8.4</b>	<0.5
TFC-E003	11-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFC (cont.)</b>													
TFC-E003	07-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC-E</b>													
MTU1-I	03-JAN-11	E601	<0.5	<b>14</b>	<0.5	<0.5	<b>1</b>	<1	<b>13</b>	<b>0.8</b>	<0.5	<b>9.6</b>	<b>4.6</b>
MTU1-I	08-FEB-11	E601	<0.5	<b>17</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>12</b>	<b>0.68</b>	<0.5	<b>9.8</b>	<b>4.1</b>
MTU1-I	03-MAR-11	E601	<0.5	<b>16</b>	<0.5	<0.5	<b>1</b>	<1	<b>12</b>	<b>0.63</b>	<0.5	<b>8.7</b>	<b>4.2</b>
MTU1-E	03-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	08-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC-SE</b>													
PTU1-I	10-JAN-11	E601	<0.5	<b>6.6</b>	<0.5	<0.5	<b>3.5</b>	<1	<b>17</b>	<b>0.7</b>	<0.5	<b>21</b>	<b>0.96</b>
PTU1-I	07-FEB-11	E601	<0.5	<b>7.2</b>	<0.5	<0.5	<b>3.2</b>	<1	<b>18</b>	<b>0.6</b>	<0.5	<b>20</b>	<b>0.92</b>
PTU1-I	01-MAR-11	E601	<0.5	<b>6.7</b>	<0.5	<0.5	<b>2.8</b>	<1	<b>16</b>	<b>0.66</b>	<0.5	<b>18</b>	<b>0.9</b>
PTU1-E	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	07-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	01-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD</b>													
TFD-I004	06-JAN-11	E601	<b>2.5</b>	<b>2</b>	<0.5	<0.5	<b>0.7</b>	<1	<b>0.61</b>	<b>0.98</b>	<0.5	<b>58</b>	<b>37</b>
TFD-I004	04-FEB-11	E601	<b>2.5</b>	<b>2</b>	<0.5	<0.5	<b>0.6</b>	<1	<b>0.54</b>	<b>0.78</b>	<0.5	<b>55</b>	<b>31</b>
TFD-I004	04-MAR-11	E601	<b>2.5</b>	<b>1.9</b>	<0.5	<0.5	<b>0.56</b>	<1	<b>0.58</b>	<b>0.77</b>	<0.5	<b>54</b>	<b>33</b>
TFD-E004	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	04-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	04-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-E</b>													
PTU8-I	06-JAN-11	E601	<b>3.4</b>	<b>1.6</b>	<b>0.53</b>	<b>1.7</b>	<b>8</b>	<1	<0.5	<b>7.8</b>	<0.5	<b>100</b>	<b>2.2</b>
PTU8-I	04-FEB-11	E601	<b>3.8</b>	<b>1.8</b>	<b>0.56</b>	<b>1.5</b>	<b>7.6</b>	<1	<0.5	<b>7.1</b>	<0.5	<b>120</b>	<b>1.8</b>
PTU8-I	04-MAR-11	E601	<b>4.1</b>	<b>1.5</b>	<0.5	<b>1.4</b>	<b>6.8</b>	<1	<b>0.57</b>	<b>6.9</b>	<0.5	<b>100</b>	<b>1.5</b>
PTU8-E	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	04-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	04-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFD-HPD<sup>b</sup></b>													
<b>TFD-S</b>													
PTU2-I	12-JAN-11	E601	1.4	1.6	<0.5	<0.5	3.6	<1	0.99	6.7	<0.5	76	<0.5
PTU2-I	17-FEB-11	E601	1.5	2	<0.5	<0.5	5.2	<1	1.4	6.8	<0.5	73	<0.5
PTU2-I	16-MAR-11	E601	1.5	2.3	<0.5	<0.5	5.3	<1	1.4	6.4	<0.5	72	<0.5
PTU2-E	12-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	17-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	16-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-SE</b>													
PTU11-I	06-JAN-11	E601	1	7.9	1.1	2.8	16	<1	3	51	<0.5	160	<0.5
PTU11-I	01-FEB-11	E601	0.89	6.7	1	2.3	15	<1	2.4	46	<0.5	140	<0.5
PTU11-I	03-MAR-11	E601	0.87	6.5	0.98	2.1	14	<1	2.3	40	<0.5	120	<0.5
PTU11-E	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	01-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-SS</b>													
PTU12-I	10-JAN-11	E601	2.3	2.7	0.78	2.9	14	<1	1	27	<0.5	210	7.7
PTU12-I	17-FEB-11	E601	2	2.3	0.8	2.8	12	<1	0.5	23	<0.5	130	6.7
PTU12-I	14-MAR-11	E601	2.1	2.3	0.79	2.7	12	<1	0.53	20	<0.5	98	6.7
PTU12-E	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	17-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	14-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-W</b>													
PTU6-I	11-JAN-11	E601	0.51	4.3	<0.5	<0.5	<0.5	<1	0.51	<0.5	<0.5	5.6	60
PTU6-I	17-FEB-11	E601	<0.5	4.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	6.2	61
PTU6-I	15-MAR-11	E601	<0.5	4.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.7	59
PTU6-E	11-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	17-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	15-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFE-E</b>													
PTU3-I	12-JAN-11	E601	<0.5	<b>4.2</b>	<0.5	<0.5	<b>14</b>	<1	<b>8.1</b>	<b>18</b>	<0.5	<b>95</b>	<0.5
PTU3-I	24-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<b>1</b>	<1	<b>0.84</b>	<b>1.2</b>	<0.5	<b>6.6</b>	<0.5
PTU3-I	14-MAR-11	E601	<0.5	<b>4.1</b>	<0.5	<0.5	<b>11</b>	<1	<b>7.6</b>	<b>14</b>	<0.5	<b>81</b>	<0.5
<b>TFE-E</b>													
PTU3-E	12-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	24-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	14-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-HS<sup>c</sup></b>													
GTU07-I	21-MAR-11	E601	<0.5	<b>3.8</b>	<0.5	<0.5	<b>2.7</b>	<b>5.9</b>	<b>7.1</b>	<b>15</b>	<0.5	<b>210</b>	<0.5
GTU07-E	21-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-NW</b>													
PTU9-I	10-JAN-11	E601	<0.5	<b>1.4</b>	<0.5	<0.5	<b>0.56</b>	<1	<b>1</b>	<b>0.57</b>	<0.5	<b>14</b>	<0.5
PTU9-I	17-FEB-11	E601	<0.5	<b>1.2</b>	<0.5	<0.5	<0.5	<1	<b>0.9</b>	<0.5	<0.5	<b>13</b>	<0.5
PTU9-I	14-MAR-11	E601	<0.5	<b>1.3</b>	<0.5	<0.5	<0.5	<1	<b>0.92</b>	<0.5	<0.5	<b>12</b>	<0.5
<b>TFE-E</b>													
PTU9-E	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	17-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	14-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-SE</b>													
W-359	06-JAN-11	E601	<b>3.6</b>	<b>0.94</b>	<0.5	<0.5	<b>22</b>	<1	<b>8.2</b>	<b>8</b>	<0.5	<b>210</b>	<b>1.2</b>
MTU04-I	01-FEB-11	E601	<b>5</b>	<b>1.1</b>	<b>0.59</b>	<0.5	<b>26</b>	<1	<b>7.1</b>	<b>9</b>	<0.5	<b>300</b>	<b>1.3</b>
MTU04-I	03-MAR-11	E601	<b>4.7</b>	<b>1</b>	<0.5	<0.5	<b>24</b>	<1	<b>6.9</b>	<b>8.6</b>	<0.5	<b>270</b>	<b>1.3</b>
<b>TFE-E</b>													
MTU04-E	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	01-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	03-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-SW</b>													
MTU03-I	11-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<b>1.5</b>	<b>1.6</b>	<b>1.1</b>	<b>0.78</b>	<0.5	<b>13</b>	<0.5
MTU03-I	14-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<b>1.4</b>	<b>1.5</b>	<b>0.7</b>	<b>0.71</b>	<0.5	<b>10</b>	<0.5
MTU03-I	15-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<b>1.5</b>	<b>1.4</b>	<b>1.4</b>	<b>0.7</b>	<0.5	<b>11</b>	<0.5
<b>TFE-E</b>													
MTU03-E	11-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	14-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	15-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFE-W</b>													
MTU05-I	11-JAN-11	E601	<0.5	<b>1.1</b>	<0.5	<0.5	<b>2.8</b>	<b>1.5</b>	<b>12</b>	<b>5.6</b>	<0.5	<b>30</b>	<0.5
MTU05-I	14-FEB-11	E601	<0.5	<b>1</b>	<0.5	<0.5	<b>2.4</b>	<b>1.3</b>	<b>11</b>	<b>5.5</b>	<0.5	<b>29</b>	<0.5
MTU05-I	15-MAR-11	E601	<0.5	<b>1.1</b>	<0.5	<0.5	<b>2.2</b>	<b>1.3</b>	<b>11</b>	<b>4.8</b>	<0.5	<b>27</b>	<0.5
<b>TFG-1</b>													
W-1111	13-JAN-11	E601	<b>2.9</b>	<b>9.6</b>	<0.5	<0.5	<b>0.83</b>	<1	<0.5	<b>1</b>	<0.5	<b>4.2</b>	<0.5
GTU01-I	03-FEB-11	E601	<b>2.9</b>	<b>10</b>	<0.5	<0.5	<b>1.2</b>	<1	<0.5	<b>1.1</b>	<0.5	<b>4.3</b>	<0.5
GTU01-I	17-MAR-11	E601	<b>2.7</b>	<b>10</b>	<0.5	<0.5	<b>1.2</b>	<1	<0.5	<b>0.97</b>	<0.5	<b>3.6</b>	<0.5
<b>TFG-N</b>													
MTU02-I	19-JAN-11	E601	<0.5	<b>2.7</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>1.1</b>	<b>14</b>	<0.5	<b>5</b>	<0.5
MTU02-I	03-FEB-11	E601	<0.5	<b>2.6</b>	<0.5	<0.5	<b>1.2</b>	<1	<b>1.2</b>	<b>15</b>	<0.5	<b>5.4</b>	<0.5
MTU02-I	17-MAR-11	E601	<0.5	<b>2.5</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>1.1</b>	<b>13</b>	<0.5	<b>4.6</b>	<0.5
<b>TF406</b>													
PTU5-I	06-JAN-11	E601	<0.5	<b>0.75</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.4</b>	<0.5
PTU5-I	03-FEB-11	E601	<0.5	<b>0.95</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.8</b>	<0.5
PTU5-I	16-MAR-11	E601	<0.5	<b>1</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.6</b>	<0.5
<b>TF406-NW<sup>d</sup></b>													
W-1801	06-JAN-11	E601	<0.5	<b>2</b>	<0.5	<0.5	<0.5	<1	<b>6.7</b>	<b>0.84</b>	<0.5	<b>28</b>	<0.5
GTU03-I	03-FEB-11	E601	<0.5	<b>2.1</b>	<0.5	<0.5	<0.5	<1	<b>5.4</b>	<b>0.75</b>	<0.5	<b>24</b>	<0.5
GTU03-E	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TF406-NW (cont.)</b>													
GTU03-E	03-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF518-N<sup>e</sup></b>	---	---	--	--	--	--	--	--	--	--	--	--	--
<b>TF5475-1<sup>f</sup></b>													
W-1302-2	03-MAR-11	E601	<b>4</b>	<b>58</b>	<b>2</b>	<b>9.1</b>	<b>43</b>	<b>3.3</b>	<b>13</b>	<b>83</b>	<0.5	<b>660</b>	<0.5
<b>TF5475-2</b>													
GTU09-I	18-JAN-11	E601	<b>1.6</b>	<b>21</b>	<b>0.55</b>	<b>2.4</b>	<b>16</b>	<1	<b>5.5</b>	<b>27</b>	<0.5	<b>270</b>	<0.5
GTU09-I	08-FEB-11	E601	<b>1.7</b>	<b>20</b>	<b>0.59</b>	<b>2.1</b>	<b>17</b>	<1	<b>7</b>	<b>28</b>	<0.5	<b>260</b>	<0.5
GTU09-I	10-MAR-11	E601	<b>1.5</b>	<b>16</b>	<0.5	<b>1.8</b>	<b>14</b>	<1	<b>5.3</b>	<b>26</b>	<0.5	<b>220</b>	<0.5
GTU09-E	18-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	08-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	10-MAR-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF5475-3<sup>g</sup></b>	---	---	--	--	--	--	--	--	--	--	--	--	--

Notes on following page.

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

<sup>a</sup> TFA-W effluent is discharged to the Livermore Water Reclamation Plant in accordance with Permit #151OG (2006-2008). The discharge limit for Total Toxic Organics is 1.0 mg/L.

<sup>b</sup> TFD-HPD has been modified to operate as a circulation cell to perform in situ bioremediation of contaminated ground water and sediments.

<sup>c</sup> TFE-HS did not operate during the months of January and February due to well development work related to the pneumatic fracturing project.

<sup>d</sup> TF406-NW did not operate in March due to facility low flow caused from biofouling of the single extraction well W-1801.

<sup>e</sup> TF518-N did not operate during this reporting period due to mixed waste disposition issues.

<sup>f</sup> TF5475-1 did not operate during this reporting period due to mixed waste disposition issues.

<sup>g</sup> TF5475-3 did not operate during this reporting period due to mixed waste disposition issues.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFA</b>													
W-109	07-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<b>0.5</b>	<b>1.9</b>	<0.5	<0.5	<0.5
W-262 <sup>a</sup>	01-OCT-10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<b>0.52</b>	<0.5	<0.5	<0.5
W-408	07-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<b>0.75</b>	<0.5	<0.5	<0.5
W-415	07-JAN-11	E601	<0.5	<b>1.1</b>	<b>0.81</b>	<0.5	<b>1.8</b>	<1	<0.5	<b>13</b>	<0.5	<b>1.1</b>	<0.5
W-457	07-JAN-11	E601	<0.5	<0.5	<b>1.3</b>	<0.5	<b>1.4</b>	<1	<0.5	<b>9.1</b>	<0.5	<b>0.57</b>	<0.5
W-518	07-JAN-11	E601	<0.5	<0.5	<b>3.6</b>	<0.5	<b>2</b>	<1	<0.5	<b>3.6</b>	<0.5	<0.5	<0.5
W-522	07-JAN-11	E601	<0.5	<0.5	<b>2.1</b>	<0.5	<b>1.6</b>	<1	<0.5	<b>4.2</b>	<0.5	<0.5	<0.5
W-605	07-JAN-11	E601	<0.5	<b>0.62</b>	<b>1</b>	<0.5	<b>1.6</b>	<1	<0.5	<b>20</b>	<0.5	<b>1</b>	<0.5
W-614	07-JAN-11	E601	<0.5	<b>0.51</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>7.7</b>	<0.5	<0.5	<0.5
W-712	07-JAN-11	E601	<b>3.3</b>	<b>3.6</b>	<b>1.4</b>	<0.5	<b>4.7</b>	<1	<0.5	<b>2.1</b>	<0.5	<b>4</b>	<0.5
W-714	07-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<b>11</b>	<0.5	<0.5	<0.5
W-903	07-JAN-11	E601	<0.5	<0.5	<b>1.5</b>	<0.5	<b>1.3</b>	<1	<0.5	<b>6.7</b>	<0.5	<0.5	<0.5
W-904	07-JAN-11	E601	<0.5	<0.5	<b>1</b>	<0.5	<b>1.4</b>	<1	<0.5	<b>7.8</b>	<0.5	<0.5	<0.5
W-1001	07-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	07-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<b>3.4</b>	<0.5	<0.5	<0.5
W-1009	07-JAN-11	E601	<b>1.2</b>	<b>6.1</b>	<b>0.87</b>	<0.5	<b>4.2</b>	<1	<b>0.63</b>	<b>14</b>	<0.5	<b>2.3</b>	<0.5
<b>TFA-E</b>													
W-254	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<b>0.64</b>	<1	<0.5	<b>46</b>	<0.5	<b>1.4</b>	<0.5
<b>TFA-W</b>													
W-404	16-MAR-11	E601	<0.5	<0.5	<b>1.4</b>	<0.5	<b>2.2</b>	<1	<0.5	<b>9.2</b>	<0.5	<0.5	<0.5
<b>TFB</b>													
W-357	05-JAN-11	E601	<b>1.4</b>	<b>3.1</b>	<0.5	<0.5	<b>1.7</b>	<1	<b>5.5</b>	<b>1.3</b>	<0.5	<b>38</b>	<0.5
W-610	05-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<b>2.3</b>	<1	<b>2.6</b>	<b>1.2</b>	<0.5	<b>3</b>	<0.5
W-620	05-JAN-11	E601	<0.5	<b>1.7</b>	<0.5	<0.5	<b>1.7</b>	<1	<b>3</b>	<b>1.5</b>	<0.5	<b>5.6</b>	<0.5
W-621	05-JAN-11	E601	<0.5	<b>0.87</b>	<0.5	<0.5	<b>0.69</b>	<1	<b>1.5</b>	<b>0.62</b>	<0.5	<b>4.8</b>	<0.5
W-655	05-JAN-11	E601	<0.5	<b>1</b>	<0.5	<0.5	<0.5	<1	<b>3.8</b>	<0.5	<0.5	<b>2.7</b>	<0.5
W-704	05-JAN-11	E601	<b>0.66</b>	<b>4.1</b>	<0.5	<0.5	<b>2.4</b>	<1	<b>6.2</b>	<b>3.4</b>	<0.5	<b>24</b>	<0.5
W-1423	05-JAN-11	E601	<b>0.75</b>	<b>5.7</b>	<0.5	<0.5	<b>4.1</b>	<1	<b>3.5</b>	<b>2</b>	<0.5	<b>10</b>	<0.5
<b>TFC</b>													
W-701	07-FEB-11	E601	<0.5	<b>2.2</b>	<0.5	<0.5	<b>1.6</b>	<1	<b>28</b>	<b>1.4</b>	<0.5	<b>16</b>	<0.5
W-1015	23-FEB-11	E601	<0.5	<b>0.53</b>	<0.5	<0.5	<b>0.94</b>	<1	<b>1.9</b>	<b>1.1</b>	<0.5	<b>5.3</b>	<0.5
W-1102	07-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<b>3.1</b>	<0.5	<0.5	<b>1.8</b>	<0.5
W-1103	23-FEB-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>1.3</b>	<0.5
W-1104	07-FEB-11	E601	<0.5	<b>0.59</b>	<0.5	<0.5	<0.5	<1	<b>2</b>	<b>3.2</b>	<0.5	<b>6.5</b>	<0.5
W-1116	07-FEB-11	E601	<0.5	<b>1.4</b>	<0.5	<0.5	<b>0.57</b>	<1	<b>7.5</b>	<b>2.4</b>	<0.5	<b>5.2</b>	<0.5



Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFC-E</b>													
W-368	03-JAN-11	E601	<0.5	11	<0.5	<0.5	0.72	<1	19	2.4	<0.5	15	6
W-413	03-JAN-11	E601	<0.5	15	<0.5	<0.5	1.1	<1	11	<0.5	<0.5	7.8	4
<b>TFC-SE</b>													
W-1213	10-JAN-11	E601	<0.5	3.8	<0.5	<0.5	4.4	<1	12	0.51	<0.5	21	<0.5
W-2201	10-JAN-11	E601	<0.5	8.7	<0.5	<0.5	3	<1	21	0.81	<0.5	20	1.4
<b>TFD</b>													
W-351	06-JAN-11	E601	12	2.4	<0.5	1.4	6.3	<1	2.3	7.4	<0.5	240	3.4
W-653 <sup>a</sup>	05-JAN-10	E601	27	9.2	<0.5	<0.5	0.98	1	2	0.83	<0.5	1100	<0.5
W-906	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.8	<0.5
W-907-2 <sup>a</sup>	08-APR-09	E601	<0.5	7.2	<0.5	0.6	4.2	<1	1.6	7.8	<0.5	92	<0.5
W-2011 <sup>a</sup>	27-AUG-09	E601	<0.5	0.56	<0.5	<0.5	<0.5	12	<0.5	<0.5	<0.5	4.8	<0.5
W-2101	04-FEB-11	E601	13	4.4	<0.5	<0.5	0.65	<1	2.1	0.68	<0.5	420	<0.5
W-2102 <sup>a</sup>	28-AUG-09	E601	9.1	7.5	<0.5	<0.5	0.51	2.3	2.6	0.54	<0.5	660	<0.5
W-1206	06-JAN-11	E601	0.88	1.2	<0.5	<0.5	0.8	<1	<0.5	0.75	<0.5	23	<0.5
W-1208	06-JAN-11	E601	2.8	2.4	<0.5	<0.5	<0.5	<1	<0.5	0.76	<0.5	61	49
<b>TFD-E</b>													
W-2006 <sup>a</sup>	04-OCT-10	E601	0.69	2.3	3.5	13	80	1.7	<0.5	76	<0.5	550	<0.5
W-1253 <sup>ab</sup>	11-FEB-08	E601	6	6.2	<5	<5	16	<10	17	12	<5	2300	<5
W-1255 <sup>a</sup>	11-FEB-08	E601	4.4	2	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	260	<0.5
W-1301	05-JAN-11	E601	3.3	2.1	1.9	6	52	<1	<0.5	46	<0.5	240	<0.5
W-1303	05-JAN-11	E601	4.2	3.9	1.6	5.5	11	2.2	<0.5	11	<0.5	250	11
W-1306	05-JAN-11	E601	2.8	2.3	<0.5	1.2	<0.5	<1	<0.5	2.5	<0.5	77	<0.5
W-1307	05-JAN-11	E601	2	0.57	<0.5	<0.5	0.53	<1	<0.5	0.77	<0.5	34	<0.5
W-1404 <sup>a</sup>	02-APR-10	E601	<0.5	18	<0.5	3.6	2.6	<1	<0.5	44	<0.5	49	<0.5
W-1550 <sup>a</sup>	04-OCT-10	E601	12	4.5	<0.5	<0.5	2	<1	0.94	6.6	<0.5	190	<0.5
W-2203	05-JAN-11	E601	16	3.1	<0.5	<0.5	3.8	<1	3.1	9.9	<0.5	130	1.3
<b>TFD-HPD</b>													
W-1254 <sup>a</sup>	13-OCT-10	E601	2.5	0.6	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	54	<0.5
W-1551	07-FEB-11	E601	5.4	1.9	<0.5	<0.5	<0.5	<1	1.8	3.9	<0.5	160	<0.5
W-1650 <sup>b</sup>	28-MAR-11	E601	2.8	1.7	<1	<1	<1	<2	<4	<1	<1	140	<2
W-1653 <sup>b</sup>	28-MAR-11	E601	2.1	1.9	<1	<1	<1	<2	<4	1.3	<1	130	<2
W-1655	28-MAR-11	E601	1.2	1.9	<0.5	<0.5	<0.5	<1	<2	3.1	<0.5	87	<1
W-1657 <sup>b</sup>	28-MAR-11	E601	4	<3.1	<3.1	<3.1	<3.1	<6.3	<13	<3.1	<3.1	350	<6.3

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFD-S</b>													
W-1503	12-JAN-11	E601	1.9	2	<0.5	<0.5	1.7	<1	0.53	2.1	<0.5	67	<0.5
W-1504	12-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	7.8	<1	1.7	16	<0.5	87	<0.5
W-1510 <sup>a</sup>	06-OCT-10	E601	<0.5	1.7	<0.5	<0.5	1.9	<1	<0.5	3.2	<0.5	25	0.65
<b>TFD-SE</b>													
W-314	06-JAN-11	E601	0.94	8.4	0.87	1.4	9.4	<1	4	17	<0.5	140	<0.5
W-2005	06-JAN-11	E601	0.75	1.1	<0.5	<0.5	9.5	<1	<0.5	19	<0.5	35	<0.5
W-1308	06-JAN-11	E601	<0.5	2.3	1.6	5.4	20	<1	<0.5	110	<0.5	140	<0.5
W-1403	06-JAN-11	E601	2.7	19	1.6	6.8	55	<1	4.6	98	<0.5	440	<0.5
W-1904 <sup>a</sup>	26-DEC-07	E601	<0.5	<0.5	0.54	0.67	5.8	<1	<0.5	39	<0.5	42	<0.5
SIP-ETC-201 <sup>a</sup>	26-DEC-07	E601	<0.5	0.55	0.59	1.1	8.5	<1	<0.5	59	<0.5	60	<0.5
<b>TFD-SS</b>													
W-1523	10-JAN-11	E601	5.2	4.6	0.6	2.1	17	<1	2.1	31	<0.5	240	<0.5
W-1601	10-JAN-11	E601	3.7	4.2	1.3	5.7	24	<1	1.4	92	<0.5	310	<0.5
W-1602	10-JAN-11	E601	<0.5	1.5	<0.5	<0.5	0.66	<1	<0.5	5	<0.5	18	8.1
W-1603	10-JAN-11	E601	1.7	2.2	1	4.1	13	1	<0.5	31	<0.5	140	11
<b>TFD-W</b>													
W-1215	11-JAN-11	E601	<0.5	6.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.4	26
W-1216	11-JAN-11	E601	<0.5	3.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.8	48
W-1902	11-JAN-11	E601	0.63	3.4	<0.5	<0.5	<0.5	<1	0.54	<0.5	<0.5	7.8	84
<b>TFE-E</b>													
W-566	12-JAN-11	E601	0.59	5	<0.5	<0.5	5.9	<1	9.3	3.7	<0.5	47	<0.5
W-1109	12-JAN-11	E601	<0.5	0.63	<0.5	<0.5	36	<1	6.1	53	<0.5	210	<0.5
W-1903	12-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	47	<1	12	33	<0.5	49	<0.5
W-1909	16-MAR-11	E601	<0.5	<0.5	0.51	<0.5	29	<1	1.4	47	<0.5	65	<0.5
W-2305	12-JAN-11	E601	<0.5	0.86	0.71	<0.5	59	<1	13	77	<0.5	300	<0.5
<b>TFE-HS</b>													
W-2012 <sup>a</sup>	04-OCT-10	E601	2.4	2.1	<0.5	<0.5	7.4	2.2	4.3	9.2	<0.5	270	<0.5
W-2105	21-MAR-11	E601	<0.5	4	<0.5	<0.5	2.7	6	7.1	15	<0.5	230	<0.5
<b>TFE-NW</b>													
W-1211	10-JAN-11	E601	<0.5	2	<0.5	<0.5	<0.5	<1	1.5	<0.5	<0.5	10	<0.5
W-1409	10-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	1	<1	<0.5	1.5	<0.5	22	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> -<	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFE-SE</b>													
W-359	06-JAN-11	E601	3.6	0.94	<0.5	<0.5	22	<1	8.2	8	<0.5	210	1.2
<b>TFE-SW</b>													
W-1518	11-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	1.5	1.7	1.1	0.82	<0.5	12	<0.5
W-1520	11-JAN-11	E601	<0.5	8	<0.5	3.8	2.3	37	<0.5	13	<0.5	310	<0.5
W-1522	11-JAN-11	E601	0.67	2.4	1.1	<0.5	8.5	19	2.6	1.8	<0.5	65	<0.5
<b>TFE-W</b>													
W-292	11-JAN-11	E601	<0.5	0.84	<0.5	<0.5	1.1	2.9	1.3	1.2	<0.5	20	<0.5
W-305	11-JAN-11	E601	<0.5	1.3	<0.5	<0.5	3.5	<1	17	8.3	<0.5	35	0.68
<b>TFG-1</b>													
W-1111	13-JAN-11	E601	2.9	9.6	<0.5	<0.5	0.83	<1	<0.5	1	<0.5	4.2	<0.5
<b>TFG-N</b>													
W-1806	19-JAN-11	E601	<0.5	2.1	<0.5	<0.5	<0.5	<1	<0.5	11	<0.5	3.1	<0.5
W-1807	19-JAN-11	E601	<0.5	3	<0.5	<0.5	1.7	<1	1.6	16	<0.5	5.9	<0.5
<b>TF406</b>													
W-1309	06-JAN-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.1	<0.5
W-1310	06-JAN-11	E601	<0.5	0.9	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	6.6	<0.5
<b>TF406-NW</b>													
W-1801	06-JAN-11	E601	<0.5	2	<0.5	<0.5	<0.5	<1	6.7	0.84	<0.5	28	<0.5
<b>TF518-N<sup>c</sup></b>													
W-1410 <sup>a</sup>	08-SEP-10	E624	3.1	2.3	<1	<1	<1	<1	<1	<1	<1	24	<1
<b>TF518-PZ</b>													
W-1615	18-JAN-11	E601	<0.5	0.53	<0.5	<0.5	1.9	<1	<0.5	38	<0.5	140	<0.5
W-518-1913 <sup>a</sup>	11-AUG-10	E601	<0.5	<0.5	<0.5	<0.5	0.6	<1	<0.5	10	<0.5	52	<0.5
W-518-1914 <sup>a</sup>	11-AUG-10	E601	<0.5	<0.5	<0.5	<0.5	0.55	1.3	<0.5	410	<0.5	170	<0.5
W-518-1915	18-JAN-11	E601	<0.5	1.1	<0.5	<0.5	11	<1	<0.5	150	<0.5	1400	<0.5
SVB-518-201 <sup>a</sup>	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	35	<0.5	8.5	<0.5
SVB-518-204 <sup>a</sup>	07-FEB-08	E601	<0.5	0.63	<0.5	<0.5	1.4	<1	<0.5	43	<0.5	550	<0.5
<b>TF5475-1<sup>c</sup></b>													
W-1302-2	03-MAR-11	E601	4	58	2	9.1	43	3.3	13	83	<0.5	660	<0.5

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TF5475-2</b>													
W-1108	18-JAN-11	E601	<b>1.7</b>	<b>21</b>	<b>0.55</b>	<b>2.3</b>	<b>18</b>	<1	<b>6</b>	<b>32</b>	<0.5	<b>300</b>	<0.5
W-1415 <sup>a</sup>	12-NOV-10	E601	<0.5	<b>3.2</b>	<0.5	<0.5	<b>2.3</b>	<1	<b>0.72</b>	<b>2.6</b>	<0.5	<b>21</b>	<0.5
<b>TF5475-3<sup>c</sup></b>													
W-1604 <sup>a</sup>	21-AUG-07	E601	<b>2.9</b>	<b>29</b>	<b>0.94</b>	<b>5.2</b>	<b>23</b>	<1	<b>17</b>	<b>45</b>	<0.5	<b>390</b>	<0.5
W-1605 <sup>a</sup>	24-JUN-10	E601	<0.5	<b>22</b>	<b>0.6</b>	<b>11</b>	<b>3.3</b>	<b>1.5</b>	<0.5	<b>7.8</b>	<0.5	<b>87</b>	<0.5
W-1608 <sup>a</sup>	24-JUN-10	E601	<0.5	<b>26</b>	<0.5	<b>4.8</b>	<b>2.3</b>	<b>1.8</b>	<0.5	<b>6</b>	<0.5	<b>51</b>	<0.5
W-1609 <sup>a</sup>	24-JUN-10	E601	<0.5	<b>36</b>	<b>0.71</b>	<b>6.7</b>	<b>6.5</b>	<1	<0.5	<b>12</b>	<0.5	<b>100</b>	<0.5

Notes on following page.

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

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<sup>a</sup> Most recent VOC sample results available.

<sup>b</sup> Elevated detection limit due to dilution.

<sup>c</sup> Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>VTFD-ETCS</b>													
W-1904 <sup>a</sup>	09-JUN-09	TO15DIT	<0.005	<b>0.041</b>	<b>0.0056</b>	<0.005	<b>0.25</b>	<0.005	<0.005	<b>2.1</b>	<0.005	<b>0.67</b>	<0.005
W-ETC-2003	27-JAN-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.02</b>	<0.005	<0.005	<b>0.26</b>	<0.005	<b>0.12</b>	<0.005
W-ETC-2004A	27-JAN-11	TO15DIT	<0.005	<b>0.02</b>	<0.005	<0.005	<b>0.012</b>	<0.005	<0.005	<b>0.52</b>	<0.005	<b>0.2</b>	<0.005
W-ETC-2004B	27-JAN-11	TO15DIT	<b>0.0056</b>	<b>0.018</b>	<b>0.014</b>	<b>0.0055</b>	<b>0.16</b>	<0.005	<0.005	<b>1.8</b>	<0.005	<b>1.4</b>	<0.005
SIP-ETC-201 <sup>a</sup>	09-JUN-09	TO15DIT	<0.005	<b>0.009</b>	<b>0.037</b>	<b>0.0059</b>	<b>0.65</b>	<0.005	<0.005	<b>2.9</b>	<0.005	<b>1.4</b>	<0.005
<b>VTFD-HS<sup>b</sup></b>													
W-653 <sup>a</sup>	03-NOV-09	TO15DIT	<b>0.026</b>	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.016</b>	<0.005	<0.005	<b>0.58</b>	<0.005
W-2011 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.081</b>	<0.005
W-2101 <sup>a</sup>	03-NOV-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.052</b>	<0.005
W-2102 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.11</b>	<0.005
<b>VTFE-ELM<sup>c</sup></b>													
W-1903 <sup>a</sup>	14-OCT-10	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.13</b>	<0.005	<b>0.033</b>	<b>0.052</b>	<0.005	<b>0.11</b>	<0.005
W-1909 <sup>a</sup>	14-OCT-10	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.04</b>	<b>0.0068</b>	<b>0.031</b>	<b>0.0082</b>	<0.005	<b>0.035</b>	<0.005
W-2305 <sup>a</sup>	14-OCT-10	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>1.8</b>	<0.005	<b>0.8</b>	<b>3.1</b>	<0.005	<b>4.4</b>	<b>0.0052</b>
W-543-001 <sup>a</sup>	14-OCT-10	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.043</b>	<0.005	<b>0.0054</b>	<b>0.82</b>	<0.005	<b>0.31</b>	<0.005
W-543-003 <sup>a</sup>	14-OCT-10	TO15DIT	<0.005	<b>0.01</b>	<0.005	<0.005	<b>0.11</b>	<0.005	<b>0.013</b>	<b>0.25</b>	<0.005	<b>0.64</b>	<0.005
W-543-1908 <sup>a</sup>	14-OCT-10	TO15DIT	<b>0.49</b>	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.0065</b>	<b>0.035</b>	<0.005	<b>0.12</b>	<0.005
<b>VTFE-HS</b>													
W-2105 <sup>a</sup>	28-JUL-10	TO15DIF	<0.005	<0.005	<0.005	<0.005	<b>0.024</b>	<0.005	<b>0.042</b>	<b>0.11</b>	<0.005	<b>0.5</b>	<0.005
W-ETS-2008A	24-JAN-11	TO15DIT	<0.005	<b>0.014</b>	<0.005	<0.005	<0.005	<0.005	<b>0.0051</b>	<b>0.042</b>	<0.005	<b>0.097</b>	<b>0.0067</b>
W-ETS-2008B	24-JAN-11	TO15DIT	<b>0.0053</b>	<b>0.039</b>	<0.005	<0.005	<b>0.024</b>	<b>0.02</b>	<b>0.15</b>	<b>0.94</b>	<0.005	<b>3</b>	<b>0.014</b>
W-ETS-2009	24-JAN-11	TO15DIT	<0.005	<b>0.0089</b>	<0.005	<0.005	<0.005	<0.005	<b>0.022</b>	<b>0.098</b>	<0.005	<b>0.26</b>	<0.005
W-ETS-2010A	24-JAN-11	TO15DIT	<0.005	<b>0.01</b>	<0.005	<0.005	<b>0.011</b>	<b>0.036</b>	<b>0.045</b>	<b>0.22</b>	<0.005	<b>1.1</b>	<0.005
W-ETS-2010B	24-JAN-11	TO15DIT	<0.005	<b>0.051</b>	<0.005	<0.005	<b>0.011</b>	<b>0.036</b>	<b>0.16</b>	<b>0.22</b>	<0.005	<b>1.1</b>	<0.005
<b>VTF406-HS</b>													
W-217	27-JAN-11	TO15DIT	<b>0.18</b>	<b>0.031</b>	<b>0.014</b>	<0.01	<b>1.3</b>	<b>0.015</b>	<b>0.18</b>	<b>1.5</b>	<0.01	<b>2.4</b>	<0.01
W-514-2007A	27-JAN-11	TO15DIT	<b>0.016</b>	<0.013	<0.013	<0.013	<b>0.032</b>	<0.013	<0.013	<b>0.15</b>	<0.013	<b>0.41</b>	<b>0.14</b>
W-514-2007B	27-JAN-11	TO15DIT	<b>0.093</b>	<b>0.015</b>	<0.012	<0.012	<b>0.68</b>	<0.012	<b>0.061</b>	<b>0.56</b>	<0.012	<b>1.8</b>	<b>0.024</b>
<b>VTF511</b>													
W-274 <sup>a</sup>	04-OCT-06	TO15DI	<b>0.14</b>	<b>0.02</b>	<0.0062	<0.0062	<b>0.07</b>	<0.0062	<b>0.014</b>	<b>0.33</b>	<0.0062	<b>6.1</b>	<b>0.38</b>
W-1517 <sup>a</sup>	20-DEC-07	TO15DI	<b>0.0066</b>	<0.005	<0.005	<0.005	<b>0.0068</b>	<0.005	<0.005	<b>0.022</b>	<0.005	<b>0.65</b>	<b>0.016</b>
W-2204 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.098</b>	<b>0.034</b>	<0.005	<b>0.038</b>	<b>0.019</b>	<0.005	<b>0.0082</b>	<b>0.42</b>	<0.005	<b>3.9</b>	<0.005
W-2205 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.18</b>	<b>0.033</b>	<0.005	<b>0.0052</b>	<b>0.045</b>	<0.005	<b>0.0078</b>	<b>0.23</b>	<0.005	<b>3.6</b>	<b>0.012</b>
W-2206 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.013</b>	<b>0.022</b>	<0.005	<b>0.024</b>	<0.005	<0.005	<0.005	<b>0.24</b>	<0.005	<b>2</b>	<0.005

**Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>VTF511 (cont.)</b>													
W-2207A <sup>a</sup>	14-MAY-09	TO15DIT	<0.005	<b>0.0055</b>	<0.005	<0.005	<b>0.0053</b>	<0.005	<0.005	<b>0.01</b>	<0.005	<b>1.5</b>	<0.005
W-2207B	27-JAN-11	TO15DIT	<0.012	<b>0.012</b>	<0.012	<0.012	<0.012	<0.012	<0.012	<b>0.071</b>	<0.012	<b>2.8</b>	<0.012
W-2208A <sup>a</sup>	14-MAY-09	TO15DIT	<b>0.025</b>	<b>0.016</b>	<0.01	<0.01	<b>0.05</b>	<0.01	<0.01	<b>0.019</b>	<0.01	<b>9.8</b>	<b>0.026</b>
W-2208B	27-JAN-11	TO15DIT	<b>0.36</b>	<b>0.14</b>	<b>0.13</b>	<0.041	<b>1.9</b>	<b>0.24</b>	<b>0.14</b>	<b>0.8</b>	<0.041	<b>31</b>	<b>0.12</b>
<b>VTF518-PZ</b>													
W-1615	27-JAN-11	TO15DIT	<b>0.033</b>	<0.017	<0.017	<0.017	<b>0.64</b>	<0.017	<b>0.17</b>	<b>3.3</b>	<0.017	<b>9.9</b>	<0.017
W-518-1913 <sup>a</sup>	17-AUG-09	TO15DIT	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<b>0.19</b>	<0.17
W-518-1914 <sup>a</sup>	17-AUG-09	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<b>1.1</b>	<0.12	<b>0.61</b>	<0.12
W-518-1915	27-JAN-11	TO15DIT	<0.038	<0.038	<0.038	<0.038	<b>0.24</b>	<0.038	<0.038	<b>16</b>	<0.038	<b>30</b>	<0.038
SVB-518-201 <sup>a</sup>	14-AUG-09	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<b>0.26</b>	<0.076
SVB-518-204 <sup>a</sup>	15-JAN-08	TO15DI	<0.02	<0.02	<0.02	<0.02	<b>0.051</b>	<0.02	<0.02	<b>2.4</b>	<0.02	<b>15</b>	<0.02
<b>VTF5475<sup>d</sup></b>													
W-ETS-507 <sup>a</sup>	23-SEP-09	TO15DI	<0.005	<b>2.7</b>	<0.005	<b>0.023</b>	<0.005	<0.005	<0.005	<b>0.54</b>	<0.005	<b>2.1</b>	<0.005
W-1605 <sup>a</sup>	06-SEP-07	TO15DI	<b>0.0069</b>	<b>0.17</b>	<0.005	<b>0.15</b>	<b>0.11</b>	<0.005	<b>0.036</b>	<b>0.1</b>	<0.005	<b>0.85</b>	<0.005
W-1608 <sup>a</sup>	06-SEP-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.0061</b>	<0.005
W-2211 <sup>a</sup>	30-JUN-10	TO15DIT	<b>0.012</b>	<b>0.58</b>	<b>0.02</b>	<b>0.068</b>	<b>0.3</b>	<0.005	<b>0.053</b>	<b>0.22</b>	<0.005	<b>1.6</b>	<0.005
W-2212 <sup>a</sup>	30-JUN-10	TO15DIT	<b>0.048</b>	<b>0.73</b>	<b>0.031</b>	<b>0.033</b>	<b>0.94</b>	<0.005	<b>0.18</b>	<b>0.42</b>	<0.005	<b>3</b>	<0.005
W-2302 <sup>a</sup>	01-JUL-10	TO15DIT	<b>0.041</b>	<b>0.54</b>	<b>0.02</b>	<b>0.015</b>	<b>0.79</b>	<0.011	<b>0.12</b>	<b>0.61</b>	<0.011	<b>8.6</b>	<0.011
W-2303 <sup>a</sup>	01-JUL-10	TO15DIT	<b>0.0078</b>	<b>0.72</b>	<b>0.032</b>	<b>0.065</b>	<b>0.27</b>	<0.005	<b>0.02</b>	<b>0.35</b>	<0.005	<b>2.3</b>	<0.005
SVI-ETS-504 <sup>a</sup>	29-JUN-10	TO15DIT	<0.005	<b>0.29</b>	<b>0.0088</b>	<0.005	<b>0.092</b>	<0.005	<0.005	<b>0.083</b>	<0.005	<b>0.39</b>	<0.005

Notes on following page.

**Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.**

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<sup>a</sup> Most recent VOC vapor sample results available.

<sup>b</sup> VTFD-HS did not operate during reporting period due to dual extraction well ground water pump failure.

<sup>c</sup> VTFE-ELM did not operate during January and February due to facility modifications and upgrades.

<sup>d</sup> VTF5475 did not operate during reporting period due to mixed waste disposition issues.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.



**Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.**

<b>Treatment Facility</b>	<b>Sample Station</b>	<b>Date Sampled</b>	<b>Chromium (total)<sup>a</sup> mg/L (ppm)</b>	<b>Hexavalent Chromium mg/L (ppm)</b>
<b>TFA</b>	TFA-I001	05-JAN-11	0.0085	0.013
	TFA-E001	05-JAN-11	0.0085	0.013
<b>TFA-E</b>	W-254	10-JAN-11	0.008	NA
	STU06-E	10-JAN-11	0.0074	0.0073
<b>TFA-W</b>	TFA-W-E	12-JAN-11	0.017	NA
<b>TFB</b>	TFB-I002	05-JAN-11	0.019	NA
	TFB-E002	05-JAN-11	0.011	0.016
	TFB-E002	07-FEB-11	0.017	NA
	TFB-E002	01-MAR-11	0.015	NA
	TFB-R002	05-JAN-11	0.015	NA
<b>TFC</b>	TFC-I003	03-MAR-11	0.02	NA
	TFC-E003	11-JAN-11	0.012	NA
	TFC-E003	07-FEB-11	0.016	NA
	TFC-E003	03-MAR-11	0.013	0.014
	TFC-R003	03-MAR-11	0.0063	NA
<b>TFC-E</b>	MTU1-I	03-JAN-11	0.038	NA
	MTU1-E	03-JAN-11	<0.001	<0.005
	MTU1-E	08-FEB-11	0.0016	NA
	MTU1-E	03-MAR-11	<0.001	NA
<b>TFC-SE</b>	PTU1-I	10-JAN-11	0.025	NA
	PTU1-E	10-JAN-11	0.014	0.016
	PTU1-E	07-FEB-11	0.018	NA
	PTU1-E	01-MAR-11	0.016	NA
<b>TFD</b>	TFD-I004	06-JAN-11	0.0086	NA
	TFD-E004	06-JAN-11	0.0061	0.0091
<b>TFD-E</b>	PTU8-I	06-JAN-11	0.0064	NA
	PTU8-E	06-JAN-11	<0.005	0.0063
<b>TFD-S</b>	PTU2-I	12-JAN-11	0.0099	NA
	PTU2-E	12-JAN-11	0.0077	0.0099
<b>TFD-SE</b>	PTU11-I	06-JAN-11	0.0091	NA
	PTU11-E	06-JAN-11	0.0068	0.0096
<b>TFD-SS</b>	PTU12-I	10-JAN-11	0.011	NA
	PTU12-E	10-JAN-11	0.0085	0.011
<b>TFD-W</b>	PTU6-I	11-JAN-11	0.011	NA
	PTU6-E	11-JAN-11	0.0089	0.011
<b>TFE-E</b>	PTU3-I	12-JAN-11	0.01	NA
	PTU3-E	12-JAN-11	0.0075	0.01
<b>TFE-HS</b>	GTU07-I	21-MAR-11	<0.001	NA
	GTU07-E	21-MAR-11	<0.005	<0.005
<b>TFE-NW</b>	PTU9-I	10-JAN-11	0.013	NA
	PTU9-E	10-JAN-11	0.011	0.013

**Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.**

<b>Treatment Facility</b>	<b>Sample Station</b>	<b>Date Sampled</b>	<b>Chromium (total)<sup>a</sup> mg/L (ppm)</b>	<b>Hexavalent Chromium mg/L (ppm)</b>
<b>TFE-SE</b>	MTU04-I	06-JAN-11	0.0069	NA
	MTU04-E	06-JAN-11	<0.005	0.0069
<b>TFE-SW</b>	MTU03-I	11-JAN-11	0.0049	NA
	MTU03-E	11-JAN-11	<0.005	0.005
<b>TFE-W</b>	MTU05-I	11-JAN-11	0.011	NA
	MTU05-E	11-JAN-11	0.0091	0.011
<b>TFG-1</b>	GTU01-I	13-JAN-11	0.0081	NA
	GTU01-E	13-JAN-11	<0.005	<0.005
	TFG-ASW	13-JAN-11	0.013	NA
<b>TFG-N</b>	MTU02-I	19-JAN-11	0.0086	NA
	MTU02-E	19-JAN-11	0.0063	0.0079
<b>TF406</b>	PTU5-I	06-JAN-11	0.012	NA
	PTU5-E	06-JAN-11	0.0094	0.013
<b>TF406-NW</b>	GTU03-I	06-JAN-11	0.0035	NA
	GTU03-E	06-JAN-11	<0.005	<0.005
<b>TF5475-2</b>	GTU09-I	18-JAN-11	0.014	NA
	GTU09-E	18-JAN-11	0.005	0.0054

<sup>a</sup>A discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

**Table A-5. Bioassay, turbidity, and chloride analyses of influent and effluent samples by treatment facility.**

<b>Treatment Facility</b>	<b>Sample Station</b>	<b>Date Sampled</b>	<b>Aquatic Bioassay<sup>a</sup> Percent Survival</b>	<b>Turbidity Nephelometric Turbidity Units (NTU)</b>	<b>Chloride (mg/L)</b>
<b>TFA</b>	TFA-I001	05-JAN-11	NA	NA	77
<b>TFA</b>	TFA-E001	05-JAN-11	100 (100)	0.33	76
<b>TFA-E</b>	STU06-E	10-JAN-11	100 (100)	0.22	44
<b>TFB</b>	TFB-E002	05-JAN-11	100 (100)	0.17	67
<b>TFC</b>	TFC-E003	03-MAR-11	100 (100)	0.18	120
<b>TFC-E</b>	MTU1-E	03-JAN-11	100 (100)	0.13	120
<b>TFC-SE</b>	PTU1-E	10-JAN-11	100 (100)	0.25	91
<b>TFD</b>	TFD-E004	06-JAN-11	100 (100)	0.14	280
<b>TFD-E</b>	PTU8-E	06-JAN-11	100 (100)	1.2	320
<b>TFD-S</b>	PTU2-E	12-JAN-11	100 (100)	0.18	76
<b>TFD-SE</b>	PTU11-E	06-JAN-11	100 (100)	0.13	150
<b>TFD-SS</b>	PTU12-E	10-JAN-11	100 (100)	0.17	130
<b>TFD-W</b>	PTU6-E	11-JAN-11	100 (100)	0.11	200
<b>TFE-E</b>	PTU3-E	12-JAN-11	100 (100)	0.23	100
<b>TFE-HS</b>	GTU07-E	21-MAR-11	100 (100)	0.88	28
<b>TFE-NW</b>	PTU9-E	10-JAN-11	100 (100)	0.21	90
<b>TFE-SE</b>	MTU04-E	06-JAN-11	100 (100)	0.29	93
<b>TFE-SW</b>	MTU03-E	11-JAN-11	100 (100)	0.12	70
<b>TFE-W</b>	MTU05-E	11-JAN-11	100 (100)	0.12	59
<b>TFG-1</b>	GTU01-E	13-JAN-11	100 (100)	0.2	33
<b>TFG-N</b>	MTU02-E	19-JAN-11	100 (100)	0.13	26
<b>TF406</b>	PTU5-E	06-JAN-11	100 (100)	0.15	61
<b>TF406-NW</b>	GTU03-E	06-JAN-11	100 (100)	0.15	45
<b>TF5475-2</b>	GTU09-E	18-JAN-11	100 (100)	0.38	110

<sup>a</sup>Test species was Fathead minnow and the test duration was 96 hours.

Percent survival in the control group samples shown in parentheses.

Note: NA = not applicable

Table A-6. Metals analyses of influent and effluent samples by treatment facility as compared to the instantaneous Maximum.

		Antimony	Arsenic	Beryllium	Boron	Cadmium	Copper	Cyanide	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		<-	-	-	-	-	-	mg/L (ppm)	-	-	-	-	-	-	-	-	->
Wet Season <sup>a</sup> (December 1 - March 31)		NA	0.01	NA	NA	0.002	0.0236	NA	NA	0.006	NA	0.002	0.3	0.01	0.1	NA	0.220
Sample Station	Date Sampled																
<b>TFA</b>																	
TFA-I001	05-JAN-11	<0.005	<0.002	<0.0002	<b>0.71</b>	<0.0005	<0.001	NA	<0.1	<0.005	<0.03	<0.0002	<b>0.0023</b>	<0.002	<0.001	<0.001	<10
TFA-E001	05-JAN-11	<0.005	<0.002	<0.0002	<b>0.72</b>	<0.0005	<0.001	NA	<0.1	<0.005	<0.03	<0.0002	<b>0.0022</b>	<0.002	<0.001	<0.001	<10
<b>TFA-E</b>																	
STU06-E	10-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFA-W</b>																	
TFA-W-E	12-JAN-11	NA	<0.002	NA	NA	<0.005	<0.01	NA	NA	<0.002	NA	<0.0002	<0.005	NA	<0.01	NA	<0.05
<b>TFB</b>																	
TFB-E002	05-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<b>0.0053</b>	<0.005	<0.005	<0.001	<0.01
<b>TFC</b>																	
TFC-E003	03-MAR-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFC-E</b>																	
MTU1-E	03-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFC-SE</b>																	
PTU1-E	10-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFD</b>																	
TFD-E004	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFD-E</b>																	
PTU8-E	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<b>0.0054</b>	<0.005	<0.005	<0.001	<0.01
<b>TFD-S</b>																	
PTU2-E	12-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<b>0.022</b>
<b>TFD-SE</b>																	
PTU11-E	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<b>0.0023</b>	<0.005	<0.005	<0.001	<0.01
<b>TFD-SS</b>																	
PTU12-E	10-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFD-W</b>																	
PTU6-E	11-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFE-E</b>																	
PTU3-E	12-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFE-HS</b>																	
GTU07-E	21-MAR-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01

Table A-6. Metals analyses of influent and effluent samples by treatment facility as compared to the instantaneous Maximum.

		Antimony	Arsenic	Beryllium	Boron	Cadmium	Copper	Cyanide	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		<-	-	-	-	-	-	mg/L (ppm)	-	-	-	-	-	-	-	-	->
<b>Wet Season<sup>a</sup></b> (December 1 - March 31)		NA	0.01	NA	NA	0.002	0.0236	NA	NA	0.006	NA	0.002	0.3	0.01	0.1	NA	0.220
Sample Station	Date Sampled																
<b>TFE-NW</b>																	
PTU9-E	10-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFE-SE</b>																	
MTU04-E	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFE-SW</b>																	
MTU03-E	11-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFE-W</b>																	
MTU05-E	11-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFG-1</b>																	
GTU01-E	13-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TFG-N</b>																	
MTU02-E	19-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TF406</b>																	
PTU5-E	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TF406-NW</b>																	
GTU03-E	06-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01
<b>TF5475-2</b>																	
GTU09-E	18-JAN-11	<0.005	<0.005	<0.001	NA	<0.001	<0.005	NA	NA	<0.005	NA	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01

<sup>a</sup>The Explanation of Significant Differences for metals discharge identifies the Instantaneous Maximum concentrations for the wet season (December 1 - March 30).

NA = not applicable

Numbers in **BOLD** print indicate positive values above the detection limit.

Shaded values exceeded the discharge limit. See text for explanation.

Table A-7. Radiological analyses of effluent and receiving waters by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Gross Alpha <-	Gross Beta pCi/L	Tritium ->
<b>TFA</b>	TFA-E001	05-JAN-11	<b>4.01</b>	<b>3.07</b>	<100
<b>TFA-E</b>	STU06-E	10-JAN-11	<2	<3	<100
<b>TFB</b>	TFB-E002	05-JAN-11	<2	<3	<100
<b>TFB</b>	TFB-R002	05-JAN-11	<b>3.97</b>	<b>3.55</b>	<100
<b>TFC</b>	TFC-E003	03-MAR-11	<b>3.22</b>	<3	<b>139</b>
<b>TFC</b>	TFC-R003	03-MAR-11	<2	<3	<b>121</b>
<b>TFC-E</b>	MTU1-E	03-JAN-11	<2	<3	<b>177</b>
<b>TFC-SE</b>	PTU1-E	10-JAN-11	<2	<3	<b>207</b>
<b>TFD</b>	TFD-E004	06-JAN-11	<b>2.37</b>	<3	<100
<b>TFD-E</b>	PTU8-E	06-JAN-11	<b>2</b>	<3	<100
<b>TFD-S</b>	PTU2-E	12-JAN-11	<b>2.42</b>	<3	<b>371</b>
<b>TFD-SE</b>	PTU11-E	06-JAN-11	<b>6.13</b>	<b>6.34</b>	<b>263</b>
<b>TFD-SS</b>	PTU12-E	10-JAN-11	<2	<3	<b>207</b>
<b>TFD-W</b>	PTU6-E	11-JAN-11	<b>3.37</b>	<b>4.36</b>	<100
<b>TFE-E</b>	PTU3-E	12-JAN-11	<2	<3	<100
<b>TFE-HS</b>	GTU07-E	21-MAR-11	<2	<b>5.77</b>	<100
<b>TFE-NW</b>	PTU9-E	10-JAN-11	<2	<3	<b>140</b>
<b>TFE-SE</b>	MTU04-E	06-JAN-11	<2	<3	<100
<b>TFE-SW</b>	MTU03-I	11-JAN-11	NA	NA	<b>253</b>
<b>TFE-SW</b>	MTU03-E	11-JAN-11	<b>2.55</b>	<3	<b>258</b>
<b>TFE-W</b>	MTU05-E	11-JAN-11	<b>3.49</b>	<b>3.82</b>	<b>169</b>
<b>TFG-1</b>	GTU01-E	13-JAN-11	<b>2.2</b>	<3	<b>206</b>
<b>TFG-1</b>	TFG-ASW	13-JAN-11	<2	<3	<100
<b>TFG-N</b>	MTU02-E	19-JAN-11	<b>3.38</b>	<b>3.87</b>	<b>134</b>
<b>TF406</b>	PTU5-E	06-JAN-11	<2	<3	<100
<b>TF406-NW</b>	W-1801	06-JAN-11	NA	NA	<100
<b>TF406-NW</b>	GTU03-E	06-JAN-11	<b>8.49</b>	<3	<100
<b>TF518-N</b>	W-1410	07-MAR-11	NA	NA	<b>760</b>
<b>TF5475-1</b>	W-1302-2	03-MAR-11	NA	NA	<b>2300</b>
<b>TF5475-2</b>	GTU09-E	18-JAN-11	<2	<3	<b>366</b>

Numbers in **BOLD** print indicate positive values above the detection limit.

## Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFA-W-I is an influent sampling port prior to the sediment bag filter immediately following W-404.

TFA-W-E is an effluent sampling port immediately following the sediment bag filter; the water is then discharged to the Livermore Water Reclamation Plant (LWRP).

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Drainage Retention Basin or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

## Explanation of Abbreviations

MTU05 receiving water is routinely sampled at the TFC-R003 location.

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.



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**Attachment B**

**Self-Monitoring Reports**

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# Self-Monitoring Report

## LLNL Treatment Facility A (TFA)

### AREA TFA

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u><b>30</b></u>	<u><b>31</b></u>																				
January	<u><b>01</b></u>	<u><b>02</b></u>	<u><b>03</b></u>	<u><b>04</b></u>	<u><b>05</b></u>	<u><b>06</b></u>	<u><b>07</b></u>	<u><b>08</b></u>	<u><b>09</b></u>	<u><b>10</b></u>	<u><b>11</b></u>	<u><b>12</b></u>	<u><b>13</b></u>	<u><b>14</b></u>	<u><b>15</b></u>							
	<u><b>16</b></u>	<u><b>17</b></u>	<u><b>18</b></u>	<u><b>19</b></u>	<u><b>20</b></u>	<u><b>21</b></u>	<u><b>22</b></u>	<u><b>23</b></u>	<u><b>24</b></u>	<u><b>25</b></u>	<u><b>26</b></u>	<u><b>27</b></u>	<u><b>28</b></u>	<u><b>29</b></u>	<u><b>30</b></u>	<u><b>31</b></u>						

Total monthly time facility operated (hours): **800**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u><b>01-11-2011</b></u>
Influent pH:	<u><b>7.0</b></u>
Effluent pH:	<u><b>7.5</b></u>
Effluent Temperature (°C):	<u><b>18.4</b></u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	720,000	15.2
W-262	0	0.0
W-408	1,177,400	25.0
W-415	1,789,100	35.6
W-457	477,100	9.8
W-605	385,900	8.1
W-614	456,500	9.7
W-712	321,300	6.9
W-714	380,900	8.0
W-903	1,305,700	26.8
W-904	1,970,500	41.7
W-1009	1,097,000	23.2
W-518	318,500	8.3
W-522	1,081,300	25.7
W-1001	158,700	3.3
W-1004	527,600	11.3
Total:	<u><b>12,167,500</b></u>	<u><b>258.6</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>5,882,800</b></u>

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility A (TFA)**  
**AREA TFA**

Arroyo Seco

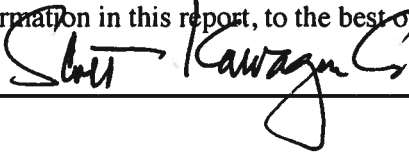
TFG-ASW

6,284,700

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: \_\_\_\_\_



Date: 01-31-2011

# Self-Monitoring Report

## LLNL Treatment Facility A (TFA)

### AREA TFA

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                   16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 587

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-04-2011  
 Influent pH: 7.0  
 Effluent pH: 7.5  
 Effluent Temperature (°C): 17.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	535,600	15.4
W-262	0	0.0
W-408	880,100	25.4
W-415	1,299,500	37.5
W-457	351,900	10.0
W-518	137,000	3.9
W-522	424,200	12.1
W-605	285,700	8.3
W-614	338,100	9.8
W-712	234,700	6.7
W-714	278,700	8.0
W-903	966,200	27.2
W-904	1,447,700	42.1
W-1001	116,100	3.3
W-1004	389,800	11.2
W-1009	812,500	23.2
Total:	<u>8,497,800</u>	<u>244.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,037,600</u>

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility A (TFA)**  
**AREA TFA**

Arroyo Seco

TFG-ASW

4,460,200

6. Comments:

Facility down on 2-18-11 due to rain water in W-904 vault. Restarted on 2-22-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

# Self-Monitoring Report

## LLNL Treatment Facility A (TFA)

### AREA TFA

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
                  **16** **17** **18** 19 20 21 **22** **23** **24** 25 26 27 **28** **29** **30** **31**

Total monthly time facility operated (hours): **510**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **03-01-2011**

Influent pH: **7.0**

Effluent pH: **7.5**

Effluent Temperature (°C): **16.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	477,300	15.5
W-262	0	0.0
W-408	790,800	25.3
W-415	430,600	38.0
W-457	335,600	10.3
W-518	112,700	3.9
W-522	409,100	12.6
W-605	258,700	8.9
W-614	294,200	9.8
W-712	214,500	6.7
W-714	240,700	8.0
W-903	860,400	27.1
W-904	1,033,900	41.6
W-1001	100,100	3.2
W-1004	342,900	11.2
W-1009	726,400	23.6
<hr/>		
Total:	<u><b>6,627,900</b></u>	<u><b>245.7</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>3,468,000</b></u>

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility A (TFA)**  
**AREA TFA**

Arroyo Seco

TFG-ASW

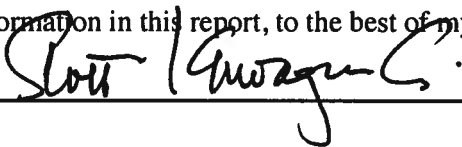
3,159,900

6. Comments:

Down 3-6-11 due to leak fault. Restart 3-7-11. W-415 pump failure on 3-8-11.  
Down 3-10-11 for interlock checks. Restart 3-11-11. Down 3-18-11 due to leak  
fault. Restart 3-22. W-904 pump failure on 3-24-11. Secured system on 3-24-11  
due to water in vault. Restart 3-28-11. Replaced W-415 pump. Restarted W-415  
on 3-29-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: \_\_\_\_\_



Date: 03-31-2011

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 06 (STU06)**  
**AREA TFA-E**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 418

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-10-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 13.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	34,122	1.3
Total:	<u>34,122</u>	<u>1.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>34,122</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shirley Kawaguchi Date: 01-31-2011



**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 06 (STU06)**  
**AREA TFA-E**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **376**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-04-2011**  
Influent pH: **7.0**  
Effluent pH: **7.0**  
Effluent Temperature (°C): **15.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-254</b>	<b>30,307</b>	<b>1.3</b>
Total:	<u><b>30,307</b></u>	<u><b>1.3</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Seco</b></u>	<u><b>TFG-ASW</b></u>	<u><b>30,307</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 06 (STU06)**  
**AREA TFA-E**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 463

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 19.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	37,456	1.4
Total:	<u>37,456</u>	<u>1.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>37,456</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shirley Hawaguchi Date: 03-31-2011

# Self-Monitoring Report

## LLNL Treatment Facility B (TFB)

### AREA TFB

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 800

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-05-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>18.1</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	316,600	6.6
W-610	375,400	7.9
W-620	223,600	4.7
W-621	363,300	7.7
W-655	399,600	8.4
W-704	859,400	18.2
W-1423	261,200	5.4
<hr/>		
Total:	<u>2,799,100</u>	<u>58.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,799,100</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-31-2011

**Land Observation Report date:**  
**TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month January Year 2011

2. Date compliance sampling performed 01-05-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>5.6</u>
6-day total precipitation (in):	<u>0.13</u>
Average wind speed/direction (mph):	<u>3/ E</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>7.0</u>	<u>17.7</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-31-2011

**Self-Monitoring Report  
LLNL Treatment Facility B (TFB)  
AREA TFB**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **662**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-07-2011**

Influent pH: **7.0**

Effluent pH: **7.5**

Effluent Temperature (°C): **18.9**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	239,300	6.9
W-610	263,700	7.9
W-620	193,300	4.7
W-621	298,100	7.6
W-655	317,500	8.2
W-704	690,400	18.2
W-1423	189,300	4.7
Total:	<u><b>2,191,600</b></u>	<u><b>58.2</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>2,191,600</b></u>

6. Comments:

System went down on 2-9-11 due to low air stripper flow fault. Restarted on 2-10-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**

**Land Observation Report date:  
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month February Year 2011

2. Date compliance sampling performed 02-07-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.5</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>5/ ESE</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

**Self-Monitoring Report  
LLNL Treatment Facility B (TFB)  
AREA TFB**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 705

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 15.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	236,400	5.5
W-610	249,100	5.9
W-620	194,900	4.9
W-621	308,800	7.2
W-655	327,300	7.8
W-704	766,100	18.2
W-1423	196,700	4.5
Total:	<u>2,279,300</u>	<u>54.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,279,300</u>

6. Comments:

System secured on 3-15-11 for interlock checks. Restarted on 3-16-11. System down on 3-26-11 due to low air stripper flow fault. Restarted on 3-28-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shirley Kawaguchi Date: 03-31-2011

**Land Observation Report date:  
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month March Year 2011

2. Date compliance sampling performed 03-01-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>6.1</u>
6-day total precipitation (in):	<u>0.57</u>
Average wind speed/direction (mph):	<u>4/ S</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-31-2011



**Self-Monitoring Report**  
**LLNL Treatment Facility C (TFC)**  
**AREA TFC**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 757

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-11-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 17.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(gal)</u>	<u>Instantaneous</u> <u>Flow Rate(gpm)</u>
W-701	365,712	13.5
W-1015	0	0.0
W-1102	52,950	7.2
W-1103	0	0.0
W-1104	1,211,792	26.9
W-1116	0	0.0
Total:	<u>1,630,454</u>	<u>47.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving</u> <u>Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,630,454</u>

6. Comments:

System went down on 1-2-11 due to high stripper level. Restarted on 1-3-11.  
System went down on 1-9-11 due to high stripper level. Restarted on 1-10-11.  
W-701 started on 1-11-11. W-1102 started on 1-24-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-31-2011

**Land Observation Report date:  
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month January Year 2011

2. Date compliance sampling performed 01-11-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>3.2</u>
6-day total precipitation (in):	<u>0.08</u>
Average wind speed/direction (mph):	<u>3/ ESE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Treatment Facility C (TFC)**  
**AREA TFC**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 628

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-08-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 20.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	485,352	13.3
W-1015	140,500	5.1
W-1102	144,408	3.8
W-1103	22,318	3.0
W-1104	1,002,400	27.1
W-1116	56,299	1.6
Total:	<u>1,851,277</u>	<u>53.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,851,277</u>

6. Comments:

System down on 2-6-11 due to high stripper level fault. Restarted on 2-7-11.  
Started W-1015 on 2-8-11. Down on 2-16-11 due to communications problem.  
Restarted on 2-17-11. Spent lead resin column removed, lag resin column moved  
to lead position, and new column installed in lag position on 2-18-11. Started  
W-1103 on 2-22-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

**Land Observation Report date:  
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month February Year 2011

2. Date compliance sampling performed 02-07-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.5</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>5/ ESE</u>

4. Receiving Data:

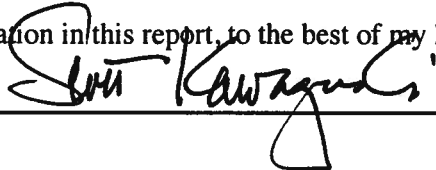
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

**Self-Monitoring Report  
LLNL Treatment Facility C (TFC)  
AREA TFC**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** **04** **05** **06** **07** 08 09 **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **680**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **03-03-2011**  
Influent pH: **7.0**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **19.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	523,424	13.3
W-1015	195,064	4.9
W-1102	138,675	3.7
W-1103	102,783	3.2
W-1104	1,086,768	26.9
W-1116	72,214	1.8
Total:	<u><b>2,118,928</b></u>	<u><b>53.8</b></u>

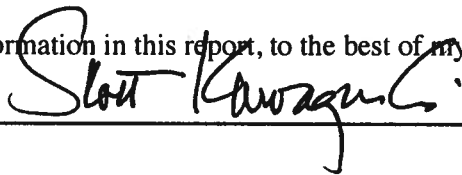
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>2,118,928</b></u>

6. Comments:

System secured on 3-7-11 for maintenance. Blowers and diffusers changed out.  
Restarted on 3-10-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-31-2011**

**Land Observation Report date:  
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month March Year 2011

2. Date compliance sampling performed 03-03-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>7.9</u>
6-day total precipitation (in):	<u>0.06</u>
Average wind speed/direction (mph):	<u>4/ SSE</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>7.0</u>	<u>13.8</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 03-31-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 1 (MTU1)**  
**AREA TFC-E**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 789

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-03-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>20.1</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	242,624	5.1
W-413	687,378	14.5
Total:	<u>930,002</u>	<u>19.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>930,002</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-01-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 1 (MTU1)**  
**AREA TFC-E**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** 13 **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **617**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-08-2011**  
Influent pH: **7.0**  
Effluent pH: **7.0**  
Effluent Temperature (°C): **20.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-368</b>	<b>188,800</b>	<b>5.1</b>
<b>W-413</b>	<b>538,904</b>	<b>14.4</b>
Total:	<u><b>727,704</b></u>	<u><b>19.5</b></u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>727,704</b></u>

6. Comments:

Facility went down on 2-12-11 due to air stripper high level and was re-started on 2-14-11. Facility was also down for part of the day on 2-3-11 for maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**



**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 1 (MTU1)**  
**AREA TFC-E**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 692

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-368</b>	<b>188,020</b>	<b>4.5</b>
<b>W-413</b>	<b>605,657</b>	<b>14.4</b>
Total:	<u><b>793,677</b></u>	<u><b>18.9</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>793,677</b></u>

6. Comments:

Facility was secured on 2-29 at 0900 hours for maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-31-2011

**Self-Monitoring Report  
LLNL Portable Treatment Unit 1 (PTU1)  
AREA TFC-SE**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 302

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-10-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 19.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	142,104	8.0
W-2201	215,731	12.3
Total:	<u>357,835</u>	<u>20.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>357,835</u>

6. Comments:

System went down on 1-7-11 due to power surge. Restarted on 1-10-11. Facility secured on 1-10-11 for CPT work in area. Restarted on 1-28-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 1 (PTU1)**  
**AREA TFC-SE**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **682**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-07-2011**

Influent pH: **7.0**

Effluent pH: **7.5**

Effluent Temperature (°C): **20.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1213</b>	<b>321,753</b>	<b>9.1</b>
<b>W-2201</b>	<b>488,339</b>	<b>12.1</b>
Total:	<u><b>810,092</b></u>	<u><b>21.2</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>810,092</b></u>

6. Comments:

Replaced spent ion exchange resin columns on 2-15-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-01-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 1 (PTU1)**  
**AREA TFC-SE**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **753**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **03-01-2011**

Influent pH: **7.0**

Effluent pH: **7.5**

Effluent Temperature (°C): **19.6**

4. Wellfield Data:

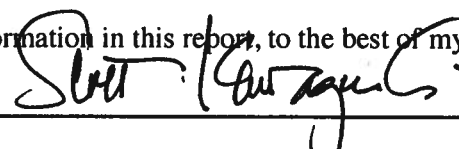
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1213</b>	<b>334,740</b>	<b>7.6</b>
<b>W-2201</b>	<b>539,338</b>	<b>12.0</b>
Total:	<u><b>874,078</b></u>	<u><b>19.6</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>874,078</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-31-2011**

# Self-Monitoring Report

## LLNL Treatment Facility D (TFD)

### AREA TFD

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																								
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>											
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>										

Total monthly time facility operated (hours): 776

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-06-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.2</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	51,500	1.1
W-653	0	0.0
W-906	175,000	3.7
W-907-2	0	0.0
W-1206	202,400	4.4
W-1208	1,028,900	22.3
W-2011	0	0.0
W-2101	7,200	0.4
W-2102	0	0.0
Total:	<u>1,465,000</u>	<u>31.9</u>

5. Discharge Information:

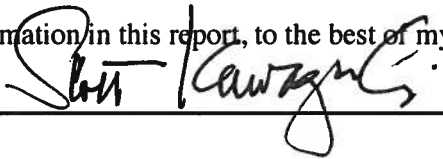
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,465,000</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

System went down on 1-6-11 due to Snap I/O fault. Restarted on 1-7-11. W-2101 started on 1-19-11.

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility D (TFD)**  
**AREA TFD**

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-31-2011

# Self-Monitoring Report

## LLNL Treatment Facility D (TFD)

### AREA TFD

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
                  **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **682**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-04-2011**  
 Influent pH: **7.0**  
 Effluent pH: **7.5**  
 Effluent Temperature (°C): **19.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	<b>45,300</b>	<b>1.1</b>
W-653	<b>0</b>	<b>0.0</b>
W-906	<b>156,300</b>	<b>3.9</b>
W-907-2	<b>0</b>	<b>0.0</b>
W-1206	<b>168,200</b>	<b>4.2</b>
W-1208	<b>906,100</b>	<b>22.3</b>
W-2011	<b>0</b>	<b>0.0</b>
W-2101	<b>15,800</b>	<b>0.4</b>
W-2102	<b>0</b>	<b>0.0</b>
Total:	<u><b>1,291,700</b></u>	<u><b>31.9</b></u>

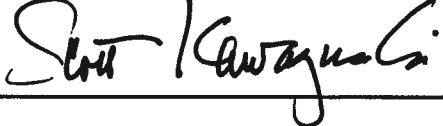
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>1,291,700</b></u>
<u><b>TFD irrigation supply</b></u>	<u><b>TFD-IRR</b></u>	<u><b>0</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility D (TFD)**  
**AREA TFD**

Operator Signature:  Date: 02-28-2011



# Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 736

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-04-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 19.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	49,100	1.1
W-653	0	0.0
W-906	169,000	3.9
W-907-2	0	0.0
W-2011	0	0.0
W-2101	16,300	0.4
W-2102	0	0.0
W-1206	172,000	3.9
W-1208	974,500	22.2
Total:	<u>1,380,900</u>	<u>31.5</u>

5. Discharge Information:


<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,380,900</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

System down on 3-28-11 due to water in vault. Restarted on 3-29-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility D (TFD)**  
**AREA TFD**

Operator Signature:  Date: 03-31-2011

# Self-Monitoring Report

## LLNL Portable Treatment Unit 8 (PTU8)

### AREA TFD-E

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																								
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>											
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>										

Total monthly time facility operated (hours): 792

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-06-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>16.3</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1301	46,100	0.9
W-1303	122,500	2.4
W-1306	15,700	0.3
W-1307	282,700	6.2
W-1404	0	0.0
W-1550	0	0.0
W-2006	0	0.0
W-2203	27,400	0.8
<hr/>		
Total:	<u>494,400</u>	<u>10.6</u>

5. Discharge Information:

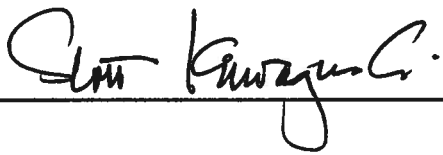
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>494,400</u>

6. Comments:

W-2203 started on 1-4-11. Facility hours estimated from logbook.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

Operator Signature:  Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **675**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-04-2011**  
Influent pH: **7.0**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **19**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1301	39,300	0.9
W-1303	97,100	2.3
W-1306	13,300	0.3
W-1307	247,000	6.1
W-1404	0	0.0
W-1550	0	0.0
W-2006	0	0.0
W-2203	27,900	0.7
Total:	<u><b>424,600</b></u>	<u><b>10.3</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>424,600</b></u>

6. Comments:

Facility hours estimated from logbook.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 744

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-04-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 19

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	0	0.0
W-1253	0	0.0
W-1255	0	0.0
W-1301	43,900	0.9
W-1306	14,217	0.3
W-1307	272,674	6.1
W-1404	0	0.0
W-2203	28,858	0.7
W-1550	0	0.0
W-1303	97,567	1.7
Total:	<u>457,216</u>	<u>9.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>457,216</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-31-2011

**Self-Monitoring Report  
LLNL Portable Treatment Unit 10 (PTU10)  
AREA TFD-HPD**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	23	24	25	26	27	28	29	30	31								
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1254</b>	<b>0</b>	<b>0.0</b>
<b>W-1551</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>0</b></u>

6. Comments:

PTU10 did not operate this month to avoid interfering with the bioremediation treatability test currently underway at at TFD-HPD.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-18-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1254</b>	<b>0</b>	<b>0.0</b>
<b>W-1551</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>0</b></u>

6. Comments:

The facility remained off during the month of February so as not to interfere with the bioremediation treatability test underway at this location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy V. Kadish Date: 03-10-2011



**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1254</b>	<b>0</b>	<b>0.0</b>
<b>W-1551</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

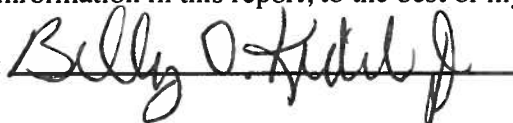
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>0</b></u>

6. Comments:

The facility remained off during the month of March so as not to interfere with the bioremediation treat- ability test underway at this location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:



Date: **04-05-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 2 (PTU2)**  
**AREA TFD-S**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	08	09	10	11	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 681

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-12-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>21.6</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	734,384	18.3
W-1504	327,508	8.2
W-1510	64,841	0.0
Total:	<u>1,126,733</u>	<u>26.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,126,733</u>

6. Comments:

System secure from 1/7/11 to 1/12/11 for electronic control trouble shooting and repair.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 2 (PTU2)**  
**AREA TFD-S**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 681

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-17-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	729,576	18.0
W-1504	325,584	8.0
W-1510	0	0.0
Total:	<u>1,055,160</u>	<u>26.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,055,160</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 2 (PTU2)**  
**AREA TFD-S**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 747

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-16-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.3

4. Wellfield Data:

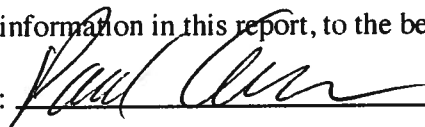
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1503</b>	<b>797,808</b>	<b>17.9</b>
<b>W-1504</b>	<b>356,512</b>	<b>8.0</b>
<b>W-1510</b>	<b>0</b>	<b>0.0</b>
<b>Total:</b>	<b><u>1,154,320</u></b>	<b><u>25.9</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>1,154,320</u></b>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 11 (PTU11)**  
**AREA TFD-SE**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>29</u>	<u>30</u>	<u>31</u>																												
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 787

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-06-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>18</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	466,890	10.7
W-1308	156,852	3.4
W-1403	79,096	1.6
W-1904	0	0.0
W-2005	14,978	0.6
SIP-ETC-201	0	0.0
Total:	<u>717,816</u>	<u>16.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>717,816</u>

6. Comments:

Found shutdown 1/4/11 @ 18:58 hrs. due to I/O communications error. Facility was restarted 1/5 @ 07:15 hrs. Facility was shutdown 1/19/11 @ 14:80 hrs. to update INIT file for Rosemount transducer installed at W-2005. Facility was restarted 1/20 @ 13:15 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 11 (PTU11)**  
**AREA TFD-SE**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 615

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-01-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	378,521	10.2
W-2005	19,916	0.0
W-1308	128,429	1.6
W-1403	60,546	3.4
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>587,412</u>	<u>15.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>587,412</u>

6. Comments:

Facility shutdown 2/11 @ 18:00 hrs on I/O communications fault. Facility was restarted 2/14 @ 10:45 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 03-03-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 11 (PTU11)**  
**AREA TFD-SE**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 743

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.2

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	466,289	10.4
W-2005	5,142	0.7
W-1308	130,086	3.3
W-1403	72,392	1.6
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>673,909</u>	<u>16.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>673,909</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-15-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 12 (PTU12)**  
**AREA TFD-SS**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 802

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-10-2011</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	344,660	7.4
W-1601	49,643	1.0
W-1602	247,015	5.2
W-1603	691,909	14.5
Total:	<u>1,333,227</u>	<u>28.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,333,227</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011



**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 12 (PTU12)**  
**AREA TFD-SS**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 679

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-17-2011  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 19.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	291,142	7.2
W-1601	41,879	1.0
W-1602	213,118	5.3
W-1603	583,583	14.4
Total:	<u>1,129,722</u>	<u>27.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,129,722</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-10-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 12 (PTU12)**  
**AREA TFD-SS**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 748

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-14-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	318,465	7.1
W-1601	45,408	1.0
W-1602	195,399	5.2
W-1603	639,349	14.3
Total:	<u>1,198,621</u>	<u>27.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,198,621</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

Operator Signature: [Signature] Date: **02-02-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 6 (PTU6)**  
**AREA TFD-W**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 679

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-17-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.2

4. Wellfield Data:

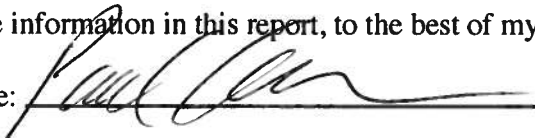
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	368,052	9.0
W-1216	408,966	10.2
W-1902	708,623	17.7
Total:	<u>1,485,641</u>	<u>36.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,485,641</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 6 (PTU6)**  
**AREA TFD-W**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 749

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-15-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 22

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	416,429	9.0
W-1216	443,723	9.9
W-1902	759,043	17.1
Total:	<u>1,619,195</u>	<u>36.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,619,195</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 11 (VES11)

### AREA VTFD-ETCS

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	<u>29</u>	<u>30</u>	<u>31</u>																				
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>								
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>							

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1904</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-ETC-2003</b>	<b>705,947</b>	<b>14.8</b>	<b>-1.65</b>	<b>57</b>	<b>822</b>
<b>SIP-ETC-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-ETC-2004B</b>	<b>338,435</b>	<b>5.9</b>	<b>-.7</b>	<b>57</b>	<b>822</b>
<b>W-ETC-2004A</b>	<b>254,622</b>	<b>5.2</b>	<b>-6.48</b>	<b>57</b>	<b>822</b>
<b>Total:</b>	<b><u>1,299,004</u></b>	<b><u>25.8</u></b>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-31-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 11 (VES11)

### AREA VTFD-ETCS

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated


February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                   16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	551,493	14.2	-2.83	60	683
W-ETC-2004A	210,862	5.2	-6.45	60	683
W-ETC-2004B	283,721	5.7	-.86	60	683
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,046,076</u>	<u>25.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-02-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 11 (VES11)

### AREA VTFD-ETCS

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	652,422	14.2	-3.47	58	746
W-ETC-2004A	322,741	5.2	-6.51	58	746
W-ETC-2004B	534,640	5.5	-.88	58	746
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,509,803</u>	<u>24.8</u>			

4. Comments:

Extraction well flow rates were increased 3/16/11.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 04-01-2011



**Self-Monitoring Report  
LLNL ISB01 (ISB01)  
AREA TFD-HPD**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 679

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	22,903	0.4
W-1653	21,255	0.4
W-1655	15,022	0.3
W-1657	6,894	0.2
Total:	<u>66,074</u>	<u>1.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>66,074</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated. The end month cumulative hours is based on a calculation.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Fume Date: 02-22-2011

**Self-Monitoring Report  
LLNL ISB01 (ISB01)  
AREA TFD-HPD**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** 05 06 07 08 09 10 11 12 13 14 15  
              **16** **17** **18** **19** 20 21 **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): 597

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	15,416	0.4
W-1653	15,179	0.4
W-1655	10,497	0.2
W-1657	4,790	0.2
Total:	<u>45,882</u>	<u>1.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>45,882</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated. The facility did not operate for a few days due to a planned power outage.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy V. Hume Date: 03-08-2011

**Self-Monitoring Report  
LLNL ISB01 (ISB01)  
AREA TFD-HPD**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 738

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1650</b>	<b>16,761</b>	<b>0.4</b>
<b>W-1653</b>	<b>15,944</b>	<b>0.4</b>
<b>W-1655</b>	<b>11,293</b>	<b>0.3</b>
<b>W-1657</b>	<b>4,884</b>	<b>0.1</b>
Total:	<u><b>48,882</b></u>	<u><b>1.2</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>ISB01 injection well</b></u>	<u><b>W-1552</b></u>	<u><b>48,882</b></u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Franklin Date: 04-05-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 13 (VES13)

### AREA VTFD-HS

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-653</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2011</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2101</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2102</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total:</b>	<b><u>0</u></b>	<b><u>0.0</u></b>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-31-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 13 (VES13)**  
**AREA VTFD-HS**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-653</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2011</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2101</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2102</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 13 (VES13)

### AREA VTFD-HS

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-653</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2011</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2101</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2102</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<hr/>					
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-30-2011

# Self-Monitoring Report

## LLNL Portable Treatment Unit 3 (PTU3)

### AREA TFE-E

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u><b>30</b></u>	<u><b>31</b></u>																													
January	<u><b>01</b></u>	<u><b>02</b></u>	<u><b>03</b></u>	<u><b>04</b></u>	<u><b>05</b></u>	<u><b>06</b></u>	<u><b>07</b></u>	<u><b>08</b></u>	<u><b>09</b></u>	<u><b>10</b></u>	<u><b>11</b></u>	<u><b>12</b></u>	<u><b>13</b></u>	<u><b>14</b></u>	<u><b>15</b></u>																
	<u><b>16</b></u>	<u><b>17</b></u>	<u><b>18</b></u>	<u><b>19</b></u>	<u><b>20</b></u>	<u><b>21</b></u>	<u><b>22</b></u>	<u><b>23</b></u>	<u><b>24</b></u>	<u><b>25</b></u>	<u><b>26</b></u>	<u><b>27</b></u>	<u><b>28</b></u>	<u><b>29</b></u>	<u><b>30</b></u>	<u><b>31</b></u>															

Total monthly time facility operated (hours): **806**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u><b>01-12-2011</b></u>
Influent pH:	<u><b>7.0</b></u>
Effluent pH:	<u><b>7.0</b></u>
Effluent Temperature (°C):	<u><b>20.9</b></u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-566</b>	<b>407,789</b>	<b>8.5</b>
<b>W-1109</b>	<b>96,879</b>	<b>2.0</b>
<b>W-1903</b>	<b>5,242</b>	<b>0.1</b>
<b>W-1909</b>	<b>0</b>	<b>0.0</b>
<b>W-2305</b>	<b>35,744</b>	<b>0.8</b>
<hr/>		
Total:	<u><b>545,654</b></u>	<u><b>11.4</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>545,654</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-02-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 3 (PTU3)**  
**AREA TFE-E**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): 576

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-24-2011  
Influent pH: 6.5  
Effluent pH: 7.0  
Effluent Temperature (°C): 17.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-566</b>	<b>289,065</b>	<b>8.4</b>
<b>W-1109</b>	<b>69,206</b>	<b>2.0</b>
<b>W-1903</b>	<b>207</b>	<b>0.0</b>
<b>W-1909</b>	<b>0</b>	<b>0.0</b>
<b>W-2305</b>	<b>3,830</b>	<b>0.0</b>
<b>Total:</b>	<u><b>362,308</b></u>	<u><b>10.4</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>362,308</b></u>

6. Comments:

System secure from 2/19/11 to 2/23/11 due to well vault leak alarm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011



**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 3 (PTU3)**  
**AREA TFE-E**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 752

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-14-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	369,434	8.2
W-1109	90,263	2.0
W-1903	372	0.0
W-1909	0	0.0
W-2305	509	0.0
Total:	<u>460,578</u>	<u>10.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>460,578</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-05-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 07 (GTU07)**  
**AREA TFE-HS**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-2012</b>	<b>0</b>	<b>0.0</b>
<b>W-2105</b>	<b>0</b>	<b>0.0</b>
<hr/>		
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>0</b></u>

6. Comments:

System secure from 10/6/10 through 12/29/10 for mechanical fracturing of the sub-surface in the vicinity of W-2012 & W-2105. System secure from 12/29/10 through 1/31/11 for Testing & Verification of system components.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-02-2011**

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 07 (GTU07)**  
**AREA TFE-HS**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28		

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-2012</b>	<b>0</b>	<b>0.0</b>
<b>W-2105</b>	<b>0</b>	<b>0.0</b>
<b>Total:</b>	<b><u>0</u></b>	<b><u>0.0</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>0</b></u>

6. Comments:

System secure from 10/6/10 through 12/29/10 for mechanical fracturing of the sub-surface in the vicinity of W-2012 & W-2105. System secure from 12/29/10 through 2/28/11 for Testing & Verification of system components.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-01-2011**

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 07 (GTU07)**  
**AREA TFE-HS**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 408

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-21-2011  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 11.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-2012</b>	<b>0</b>	<b>0.0</b>
<b>W-2105</b>	<b>493</b>	<b>4.5</b>
<hr/>		
Total:	<u><b>493</b></u>	<u><b>4.5</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>493</b></u>

6. Comments:

Facility operations with W-2012 have been discontinued. W-2105 operates cyclically thus flow rate, flow volume and hours of operation do not correlate.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-03-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 9 (PTU9)**  
**AREA TFE-NW**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 804

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-10-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>20.3</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	251,047	6.9
W-1409	156,218	3.3
Total:	<u>407,265</u>	<u>10.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>407,265</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 9 (PTU9)**  
**AREA TFE-NW**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 682

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-17-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	273,306	6.7
W-1409	121,613	2.9
Total:	<u>394,919</u>	<u>9.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>394,919</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 9 (PTU9)**  
**AREA TFE-NW**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 752

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-14-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 22.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	299,613	6.7
W-1409	133,122	2.9
Total:	<u>432,735</u>	<u>9.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>432,735</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 04 (MTU04)**  
**AREA TFE-SE**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 29 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 813

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-06-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 15.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	408,271	8.3
Total:	<u>408,271</u>	<u>8.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>408,271</u>

6. Comments:

Facility shutdown 1/12 @ 11:00 hours to update facility operating hours. Facility was restarted @ 11:39.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-31-2011



**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 04 (MTU04)**  
**AREA TFE-SE**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 669

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-01-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-359</b>	<b>336,595</b>	<b>8.3</b>
<b>Total:</b>	<b><u>336,595</u></b>	<b><u>8.3</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>336,595</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-02-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 04 (MTU04)**  
**AREA TFE-SE**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 739

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-359</b>	<b>368,668</b>	<b>8.3</b>
Total:	<u><b>368,668</b></u>	<u><b>8.3</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>368,668</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-01-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 03 (MTU03)**  
**AREA TFE-SW**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 29 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 745

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-11-2011  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 13.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1518	81,528	1.8
W-1520	16	1.2
W-1522	32	1.7
Total:	<u>81,576</u>	<u>4.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>81,576</u>

6. Comments:

The facility was down for several days due to a possible pump problem at W-1518.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy V. Kukul Date: 02-17-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 03 (MTU03)**  
**AREA TFE-SW**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** 19 20 21 **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **294**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-14-2011**  
Influent pH: **7.5**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **18.9**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1518</b>	<b>33,141</b>	<b>1.8</b>
<b>W-1520</b>	<b>0</b>	<b>0.0</b>
<b>W-1522</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>33,141</b></u>	<u><b>1.8</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>33,141</b></u>

6. Comments:

The facility shutdown on a number of occasions and did not run for several days due to discharge pump problems and problems with the pump at W-1518.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-03-2011**

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 03 (MTU03)**  
**AREA TFE-SW**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 691

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-15-2011  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 20.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1518	72,572	1.7
W-1520	0	0.0
W-1522	0	0.0
Total:	<u>72,572</u>	<u>1.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>72,572</u>

6. Comments:

The facility was shut down to replace a cracked coupling on the W-1518 down hole extraction pipe. The cracked fitting caused a leak that resulted in a pressure drop at W-1518.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Kilduff Date: 04-05-2011

Operator Signature: Billy O. Kridel Date: 02-17-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 05 (MTU05)**  
**AREA TFE-W**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 666

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-14-2011  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 19.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	230,139	5.8
W-305	347,078	8.6
Total:	<u>577,217</u>	<u>14.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>577,217</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy V. Kitch Date: 03-03-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 05 (MTU05)**  
**AREA TFE-W**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 741

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-15-2011  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	250,902	5.6
W-305	388,535	8.7
Total:	<u>639,437</u>	<u>14.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>639,437</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy I. Hotal Date: 04-05-2011



# Self-Monitoring Report

## LLNL Vapor Extraction System 16 (VES16)

### AREA VTFF-ELM

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	29	30	31													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1903</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-1909</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2305</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-543-003</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-543-1908</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-543-001</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total:</b>	<b><u>0</u></b>	<b><u>0.0</u></b>			

4. Comments:

Facility did not operate during reporting month.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:

Sam Thomas

Date: 01-31-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 16 (VES16)

### AREA VTFF-ELM

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 **02** **03** 04 05 06 07 08 09 10 11 12 13 14 **15**  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

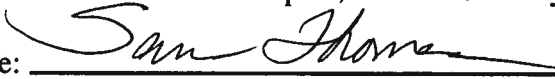
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	0	0.0	0	0	5
W-1909	0	0.0	0	0	5
W-2305	0	0.0	0	0	5
W-543-003	0	0.0	0	0	5
W-543-1908	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
<b>Total:</b>	<b><u>0</u></b>	<b><u>0.0</u></b>			

4. Comments:

Started facility operating in test and verification mode. Several rate of rise and leak tests were performed on extraction wells to determine the condition of wellhead piping and functionality of instrumentation. Several substantial leaks were discovered at facility and wellfield manifold piping. Due to these leaks, monthly volumes extracted (2051 scf) as well as flow rates measured when compliance samples were taken may not be accurate and were therefore omitted from this report. Following repair of inadequacies mentioned previously, vapor flow and leak tests were replicated at each extraction well. Actual vapor flow rates at the wells were found to be unmeasurable.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-08-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 16 (VES16)

### AREA VTFE-ELM

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	284	3.2	-25	69	6
W-1909	227	0.0	0	0	0
W-2305	22	0.0	0	0	1
W-543-001	0	0.0	0	0	0
W-543-003	40,501	0.0	0	0	4
W-543-1908	0	0.0	0	0	0
Total:	<u>41,034</u>	<u>3.2</u>			

4. Comments:

Facility operating in test and verification mode.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Hanes Date: 04-04-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 12 (VES12)

### AREA VTFE-HS

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	29	30	31																	
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15					
	16	17	18	<u>19</u>	20	<u>21</u>	22	23	<u>24</u>	25	26	27	28	29	30	31				

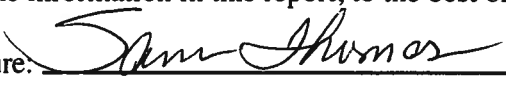
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2008A	3,913	2.7	-.43	61	3
W-ETS-2008B	863	3.2	-2.31	61	3
W-ETS-2009	768	6.8	-.26	61	3
W-ETS-2010A	4,599	10.9	-.49	61	3
W-ETS-2010B	961	2.9	-.22	61	3
W-2105	32	0.0	0	61	3
<hr/>					
Total:	<u>11,136</u>	<u>26.6</u>			

4. Comments:

Facility operated briefly to conduct post mechanical fracturing vapor flow matrix tests on extraction wells.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-09-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 12 (VES12)**  
**AREA VTFE-HS**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 02 03 04 05 06 07 08 09 10 11 12 13 **14** **15**  
                 **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	15,812	0.8	-6.47	57	269
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	129,179	10.0	-7.1	51	310
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	172,350	11.7	-1.14	51	310
Total:	<u>317,341</u>	<u>22.6</u>			

4. Comments:

Start of post mechanical fracturing operations in the TFE-HS source area.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 03-07-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 12 (VES12)

### AREA VTFF-HS

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	39,568	1.3	-2.12	59	721
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	213,341	4.8	-2.11	59	721
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	752,011	18.2	-1.89	59	721
Total:	<u>1,004,920</u>	<u>24.3</u>			

4. Comments:

Facility secured 3/3/11 @ 15:18 hrs. to replace differential pressure transducers at W-ETS-2008B and W-ETS-2010B. Facility was restarted 3/4/11 @ 10:30 hrs.  
 Facility secured 3/22/11 @ 09:43 hrs to calibrate W-ETS-2008B differential pressure transducer. Facility was restarted @ 13:00 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 04-04-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 791

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-13-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>20.6</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>415,330</u>	<u>8.7</u>
Total:	<u>415,330</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>415,330</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Land Observation Report date:  
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month January Year 2011

2. Date compliance sampling performed 01-13-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>5.2</u>
6-day total precipitation (in):	<u>0.12</u>
Average wind speed/direction (mph):	<u>3/ ESE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>7.0</u>	<u>20.1</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011



**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 670

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	352,819	8.7
Total:	<u>352,819</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>352,819</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Land Observation Report date:  
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month February Year 2011

2. Date compliance sampling performed 02-03-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>9</u>
6-day total precipitation (in):	<u>0.18</u>
Average wind speed/direction (mph):	<u>4/ SE</u>

4. Receiving Data:

<u>Sample</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Location</u>		
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature  Date: 03-10-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 739

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-17-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.4

4. Wellfield Data:

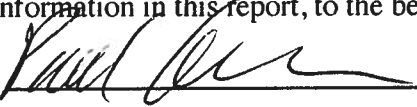
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	389,271	8.7
Total:	<u>389,271</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>389,271</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

**Land Observation Report date:  
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month March Year 2011

2. Date compliance sampling performed 03-17-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.1</u>
6-day total precipitation (in):	<u>0.38</u>
Average wind speed/direction (mph):	<u>4/SW</u>

4. Receiving Data:

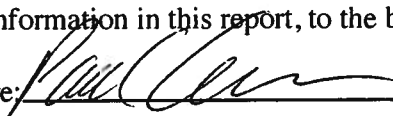
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 02 (MTU02)**  
**AREA TFG-N**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 803

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 01-19-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.7

4. Wellfield Data:

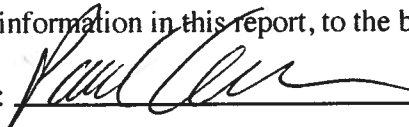
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	128,764	2.6
W-1807	219,659	4.6
Total:	<u>348,423</u>	<u>7.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>348,423</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 02 (MTU02)**  
**AREA TFG-N**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	106,732	2.6
W-1807	179,901	4.6
Total:	<u>286,633</u>	<u>7.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>286,633</u>

6. Comments:

System secure from 2/27/11 through 2/28/11 due to PLC repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 02 (MTU02)**  
**AREA TFG-N**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** 04 05 06 07 08 **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **570**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **03-17-2011**  
Influent pH: **7.0**  
Effluent pH: **7.0**  
Effluent Temperature (°C): **21.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1806</b>	<b>91,164</b>	<b>2.7</b>
<b>W-1807</b>	<b>159,201</b>	<b>4.4</b>
Total:	<u><b>250,365</b></u>	<u><b>7.1</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>250,365</b></u>

6. Comments:

System secure from 3/3/11 to 3/9/11 for system trouble shooting and repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **04-04-2011**

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 5 (PTU5)**  
**AREA TF406**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 803

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-06-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>23.6</u>

4. Wellfield Data:

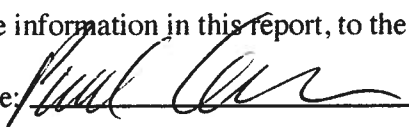
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1309</b>	<b>278</b>	<b>4.3</b>
<b>W-1310</b>	<b>726,912</b>	<b>15.3</b>
Total:	<u><b>727,190</b></u>	<u><b>19.6</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>727,190</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011



**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 5 (PTU5)**  
**AREA TF406**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 680

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	605,776	15.1
Total:	<u>605,776</u>	<u>15.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>605,776</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-01-2011

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 5 (PTU5)**  
**AREA TF406**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 750

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-16-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 23.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	661,112	14.9
Total:	<u>661,112</u>	<u>14.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>661,112</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-04-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 03 (GTU03)**  
**AREA TF406-NW**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 793

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>01-06-2011</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1801</b>	<b>77,526</b>	<b>1.8</b>
Total:	<u><b>77,526</b></u>	<u><b>1.8</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>77,526</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 03 (GTU03)**  
**AREA TF406-NW**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 600

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 02-03-2011  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 23

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1801</b>	<b>38,912</b>	<b>1.2</b>
Total:	<u><b>38,912</b></u>	<u><b>1.2</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>38,912</b></u>

6. Comments:

Facility down time due to low flow from W-1801.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-10-2011

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 03 (GTU03)**  
**AREA TF406-NW**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 31

Total monthly time facility operated (hours): 7

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1801</b>	<b>750</b>	<b>0.0</b>
Total:	<u><b>750</b></u>	<u><b>0.0</b></u>

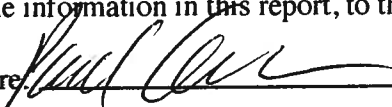
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>750</b></u>

6. Comments:

Facility hours of operation and flow volume are from W-1801 redevelopment, no water from W-1801 was treated or discharged at GTU03/TF406-NW. Hours of operation indicate total time the W-1801 well pump was recirculating well water or pumping well water to tanker for treatment elsewhere. Monthly volume for W-1801 indicates volume of water removed from W-1801 and treated elsewhere.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: 

Date: **04-05-2011**

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 09 (STU09)**  
**AREA TF518-N**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: \_\_\_\_\_

Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 09 (STU09)**  
**AREA TF518-N**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1410</b>	<b>0</b>	<b>0.0</b>
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-28-2011

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 09 (STU09)**  
**AREA TF518-N**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-30-2011



**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December 30 31  
January 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 757

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	206	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	116	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>322</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>323</u>

6. Comments:

Compressed air delivery to pneumatic pumps interrupted several times during reporting period due to tripped Ground Fault Circuit Interrupter.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-01-2011

**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
                  **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **669**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1615</b>	<b>182</b>	<b>0.0</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1915</b>	<b>97</b>	<b>0.0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>279</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>279</b></u>

6. Comments:

Water compliance sampling is not required, water is transferred to TFB main for treatment.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-02-2011**

**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 744

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1615</b>	<b>242</b>	<b>0.0</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1915</b>	<b>141</b>	<b>0.0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>383</b></u>	<u><b>0.0</b></u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>384</b></u>

6. Comments:

Water compliance sampling is not required, water is transferred to TFB main for treatment.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **04-01-2011**

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1302-2</b>	<b>0</b>	<b>0.0</b>
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>CRD-1 injection</b></u>	<u><b>W-1302-1</b></u>	<u><b>0</b></u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-02-2011**

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Fink Date: 03-03-2011

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kridel Date: 04-05-2011

# Self-Monitoring Report

## LLNL GAC Treatment Unit 09 (GTU09)

### AREA TF5475-2

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	30	31																				
January	01	02	03	04	05	<u><b>06</b></u>	<u><b>07</b></u>	<u><b>08</b></u>	<u><b>09</b></u>	<u><b>10</b></u>	<u><b>11</b></u>	<u><b>12</b></u>	<u><b>13</b></u>	<u><b>14</b></u>	<u><b>15</b></u>							
	<u><b>16</b></u>	<u><b>17</b></u>	<u><b>18</b></u>	<u><b>19</b></u>	<u><b>20</b></u>	<u><b>21</b></u>	<u><b>22</b></u>	<u><b>23</b></u>	<u><b>24</b></u>	<u><b>25</b></u>	<u><b>26</b></u>	<u><b>27</b></u>	<u><b>28</b></u>	<u><b>29</b></u>	<u><b>30</b></u>	<u><b>31</b></u>						

Total monthly time facility operated (hours): **583**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u><b>01-18-2011</b></u>
Influent pH:	<u><b>6.5</b></u>
Effluent pH:	<u><b>7.0</b></u>
Effluent Temperature (°C):	<u><b>18.6</b></u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1108</b>	<b>202,618</b>	<b>5.3</b>
<b>W-1415</b>	<b>0</b>	<b>0.0</b>
<b>Total:</b>	<u><b>202,618</b></u>	<u><b>5.3</b></u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>202,618</b></u>

6. Comments:

Facility was down from 12-30-10 till 1-6-11 due to drainage ditch maintenance.  
Flow rate for well 1108 started out higher at around 7.0 gpm over time it decreased to 5.3

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-01-2011**

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 09 (GTU09)**  
**AREA TF5475-2**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February    **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
                 **16** **17** **18** **19** **20** **21** **22** **23**    24    25    26    27    28

Total monthly time facility operated (hours): **527**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **02-08-2011**  
Influent pH: **6.5**  
Effluent pH: **7.0**  
Effluent Temperature (°C): **18.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1108</b>	<b>172,182</b>	<b>5.3</b>
<b>W-1415</b>	<b>0</b>	<b>0.0</b>
Total:	<u><b>172,182</b></u>	<u><b>5.3</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>172,182</b></u>

6. Comments:

Facility was secured due to blockage of underground discharge location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**



**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 09 (GTU09)**  
**AREA TF5475-2**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
              16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 562

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 03-10-2011  
Influent pH: 6.5  
Effluent pH: 7.0  
Effluent Temperature (°C): 18.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	170,314	0.0
W-1415	0	0.0
Total:	<u>170,314</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>170,314</u>

6. Comments:

Facility was down the first seven days for ditch and drainage maintenance. Flow rate has decreased over the month from 5.5 to 4.7 gpm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-31-2011

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-02-2011

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

February	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28		

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1604</b>	<b>0</b>	<b>0.0</b>
<b>W-1605</b>	<b>0</b>	<b>0.0</b>
<b>W-1608</b>	<b>0</b>	<b>0.0</b>
<b>W-1609</b>	<b>0</b>	<b>0.0</b>
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>CRD-2 injection</b></u>	<u><b>W-1610</b></u>	<u><b>0</b></u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy V. Finkel Date: 03-03-2011

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treated ground water was discharged

March	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1604</b>	<b>0</b>	<b>0.0</b>
<b>W-1605</b>	<b>0</b>	<b>0.0</b>
<b>W-1608</b>	<b>0</b>	<b>0.0</b>
<b>W-1609</b>	<b>0</b>	<b>0.0</b>
<hr/>		
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>CRD-2 injection</b></u>	<u><b>W-1610</b></u>	<u><b>0</b></u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Finkel Date: 04-05-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 08 (VES08)

### AREA VTF406-HS

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	<u>30</u>	<u>31</u>																													
January	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	761,934	18.6	-3.54	56	776
W-514-2007A	153,627	4.1	-4.18	56	776
W-514-2007B	460,926	11.2	-2.91	56	776
Total:					
	<u>1,376,487</u>	<u>33.8</u>			

4. Comments:

Facility shutdown 1/25/11 to remove carbon filter #058 from service. New carbon vessel was installed and facility was restarted 1/26/11 @ 10:40 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 08 (VES08)**  
**AREA VTF406-HS**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	654,070	17.6	-3.36	60	674
W-514-2007A	168,633	3.2	-3.93	60	674
W-514-2007B	384,381	12.0	-3.43	60	674
Total:	<u>1,207,084</u>	<u>32.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 03-02-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 08 (VES08)

### AREA VTF406-HS

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	665,920	16.9	-3.44	60	700
W-514-2007A	128,134	4.0	-4	60	700
W-514-2007B	445,429	10.4	-3.47	60	700
Total:	<u>1,239,483</u>	<u>31.3</u>			

4. Comments:

Secured facility 3/21/11 to inspect condition of condensate knockout system and collect samples of untreated condensate water. Facility was restarted 3/22/11 @ 14:30 hrs. Facility shutdown 3/26/11 @ 10:15 hrs due to low vapor flow. Facility was restarted 3/28/11.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 04-01-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 05 (VES05)

### AREA VTF511

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	29	30	31																		
January	01	02	03	04	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>						
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>					

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	619
W-1517	0	0.0	0	0	619
W-2204	0	0.0	0	0	619
W-2206	0	0.0	0	0	619
W-2208B	182,684	5.5	-6	57	619
W-2207A	0	0.0	0	0	619
W-2207B	202,122	5.3	-6.5	57	619
W-2208A	0	0.0	0	0	619
W-2205	0	0.0	0	0	619
<hr/>					
Total:	<u>384,806</u>	<u>10.8</u>			

4. Comments:

Facility offline 12/29 to 1/5/11 due to power outage on 12/17/10. Facility was restarted 1/5/11 @ 10:30 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-09-2011



# Self-Monitoring Report

## LLNL Vapor Extraction System 05 (VES05)

### AREA VTF511

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                   16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-1517	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2208B	182,244	5.6	-5.2	56	654
W-2207A	0	0.0	0	0	0
W-2207B	251,482	7.2	-5.6	56	654
W-2208A	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
Total:	<u>433,726</u>	<u>12.8</u>			

4. Comments:

Facility secured 2/7/11 due to loss of data on operator interface panel. Facility was restarted 2/9/11 @ 8:25

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 03-02-2011

# Self-Monitoring Report

## LLNL Vapor Extraction System 05 (VES05)

### AREA VTF511

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-274	0	0.0	0	0	0
W-1517	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	305,495	5.7	-5.5	59	743
W-2208A	0	0.0	0	0	0
W-2208B	213,208	6.3	-5	59	743
Total:	<u>518,703</u>	<u>12.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 04-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month January Week: 1 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December **30** **31**

January **01** **02** **03** **04** **05** **06** **07**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>35,660</b>	<b>3.3</b>	<b>-17.5</b>	<b>31</b>	<b>180</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>5,403</b>	<b>0.5</b>	<b>-23.7</b>	<b>31</b>	<b>180</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total:</b>	<b><u>41,063</u></b>	<b><u>3.8</u></b>			

4. Comments:

Facility experienced several shutdowns during reporting period due to tripped ground fault circuit interrupter.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas

Date: 02-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month January Week: 2 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

January     **08** **09** **10** **11** **12** **13** **14**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,265	3.9	-15.5	46	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,034	0.5	-23.2	46	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>44,299</u>	<u>4.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month January Week: 3 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated


January     **15** **16** **17** **18** **19** **20** **21**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	38,867	3.9	-15.5	40	166
W-518-1913	0	0.0	0	0	166
W-518-1914	0	0.0	0	0	166
W-518-1915	4,983	0.5	-23.2	4	166
SVB-518-201	0	0.0	0	0	166
SVB-518-204	0	0.0	0	0	166
Total:	<u>43,850</u>	<u>4.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-01-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month January Week: 4 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

January     **22** **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>34,047</b>	<b>3.9</b>	<b>-15</b>	<b>38</b>	<b>146</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>146</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>146</b>
<b>W-518-1915</b>	<b>6,111</b>	<b>0.7</b>	<b>-23</b>	<b>38</b>	<b>146</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>146</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>146</b>
<b>Total:</b>	<u><b>40,158</b></u>	<u><b>4.6</b></u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-02-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month February Week: 1 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

January    28 29 30 31  
February   01 02 03 04

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	42,913	3.7	-15.8	55	193
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,959	0.6	-23.5	55	193
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>49,872</u>	<u>4.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 03-02-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month February Week: 2 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February **05** **06** **07** **08** **09** **10**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>30,607</b>	<b>3.6</b>	<b>-16.2</b>	<b>38</b>	<b>142</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>5,101</b>	<b>0.6</b>	<b>-23.2</b>	<b>38</b>	<b>142</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>35,708</b></u>	<u><b>4.2</b></u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-02-2011**



**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month February Week: 3 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February **11** **12** **13** **14** **15** **16** **17** **18**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>41,450</b>	<b>3.6</b>	<b>-15.5</b>	<b>40</b>	<b>192</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>5,757</b>	<b>0.5</b>	<b>-23</b>	<b>40</b>	<b>192</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>47,207</b></u>	<u><b>4.1</b></u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-02-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month February Week: 4 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

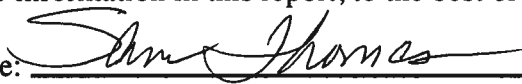
February **19** **20** **21** **22** **23** **24** **25**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>40,178</b>	<b>3.9</b>	<b>-14</b>	<b>42</b>	<b>172</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>6,181</b>	<b>0.6</b>	<b>-23.5</b>	<b>42</b>	<b>172</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>46,359</b></u>	<u><b>4.5</b></u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **03-02-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month March Week: 1 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February 26 27 28  
March 01 02 03 04

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	38,961	3.9	-15	58	166
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,994	0.6	-22.5	58	166
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>44,955</u>	<u>4.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 04-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month March Week: 2 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      **05** **06** **07** **08** **09** **10** **11**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,792	4.0	-16	40	166
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	4,974	0.5	-23	40	166
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u><b>44,766</b></u>	<u><b>4.5</b></u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **04-01-2011**

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month March **Week: 3** Year **2011**

2. Dates (in **bold** and underline ) treatment facility operated

March **12** **13** **14** **15** **16** **17** **18**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	42,613	4.2	-15	52	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,073	0.5	-22.5	52	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>47,686</u>	<u>4.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month March Week: 4 Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March **19** **20** **21** **22** **23** **24** **25**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	37,340	3.7	-16	50	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,046	0.5	-23	50	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>42,386</u>	<u>4.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 04-01-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 01 (VES01)**  
**AREA VTF5475**

1. Reporting Period: Business Month January Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

December	30	31																													
January	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shirley Kawaguchi Date: 01-31-2011

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 01 (VES01)**  
**AREA VTF5475**

1. Reporting Period: Business Month February Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

February    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                 16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-ETS-507</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-1605</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-1608</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2211</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2212</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2302</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2303</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVI-ETS-504</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>0</b></u>	<u><b>0.0</b></u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>VTF5475 Vapor Injection Well</b></u>	<u><b>SVI-ETS-505</b></u>	<u><b>0</b></u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **02-28-2011**



# Self-Monitoring Report

## LLNL Vapor Extraction System 01 (VES01)

### AREA VTF5475

1. Reporting Period: Business Month March Year 2011

2. Dates (in **bold** and underline ) treatment facility operated

March      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
                  16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 03-31-2011

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## **Attachment C**

### **Lake Haussmann**

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## Attachment C

### Lake Haussmann First Quarter 2011 Monitoring Program Summary

This attachment summarizes the first quarter 2011 LLNL Environmental Functional Area data for Lake Haussmann. Lake Haussmann is an engineered water body that has a 37 acre-ft capacity. It is located in the central portion of the Livermore Site (Fig. C-1) and receives storm water runoff and treated ground water discharges.

Samples are collected from water discharged from Lake Haussmann and analyzed as outlined in Jackson (2002). The discharge samples are used to determine compliance with discharge limits in the *Record of Decision* (DOE, 1992), and the subsequent *Explanation of Significant Differences for Metals Discharge Limits* (Berg et al., 1997).

Dry season (June, July, August, September) discharges are sampled at each manual release or monthly during periods of continual release. Wet season (October through May) discharge samples are collected at the first release of the wet season and one other discharge in conjunction with a storm water monitoring event. Analytic results of discharge samples collected at location CDBX are compared with the LLNL Arroyo Las Positas outfall sample results collected at location WPDC (Fig. C-1). The results for samples collected at locations CDBX and WPDC are presented in Table C-1. All PCBs were below detection limits. No metals or VOCs exceeded discharge limits. Acute and chronic bioassay tests showed no toxicity. The pH values did not exceed the desired range of 6.5 to 8.5.

Discharge from Lake Haussmann remained continuous during the first quarter. Lake Haussmann's upper weir gate was maintained at the lowered position during the quarter, so that releases occurred continuously to minimize changes in surface water level and allow for a more natural ecosystem.

### References

- U.S. Department of Energy, *Record of Decision for the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-109105, (1992).
- Berg, L.L., E.N. Folsom, M.D. Dresen, R.W. Bainer, and A.L. Lamarre, Eds., *Explanation of Significant Differences for Metals Discharge Limits at the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-125927 (1997).
- Jackson, C.S., *Drainage Retention Basin Monitoring Plan Change*, Letter to Ms. Naomi Feger, San Francisco Bay RWQCB, Lawrence Livermore National Laboratory, Livermore, CA, WGMG02:175:CSJ:RW:kh, (December 6, 2002).

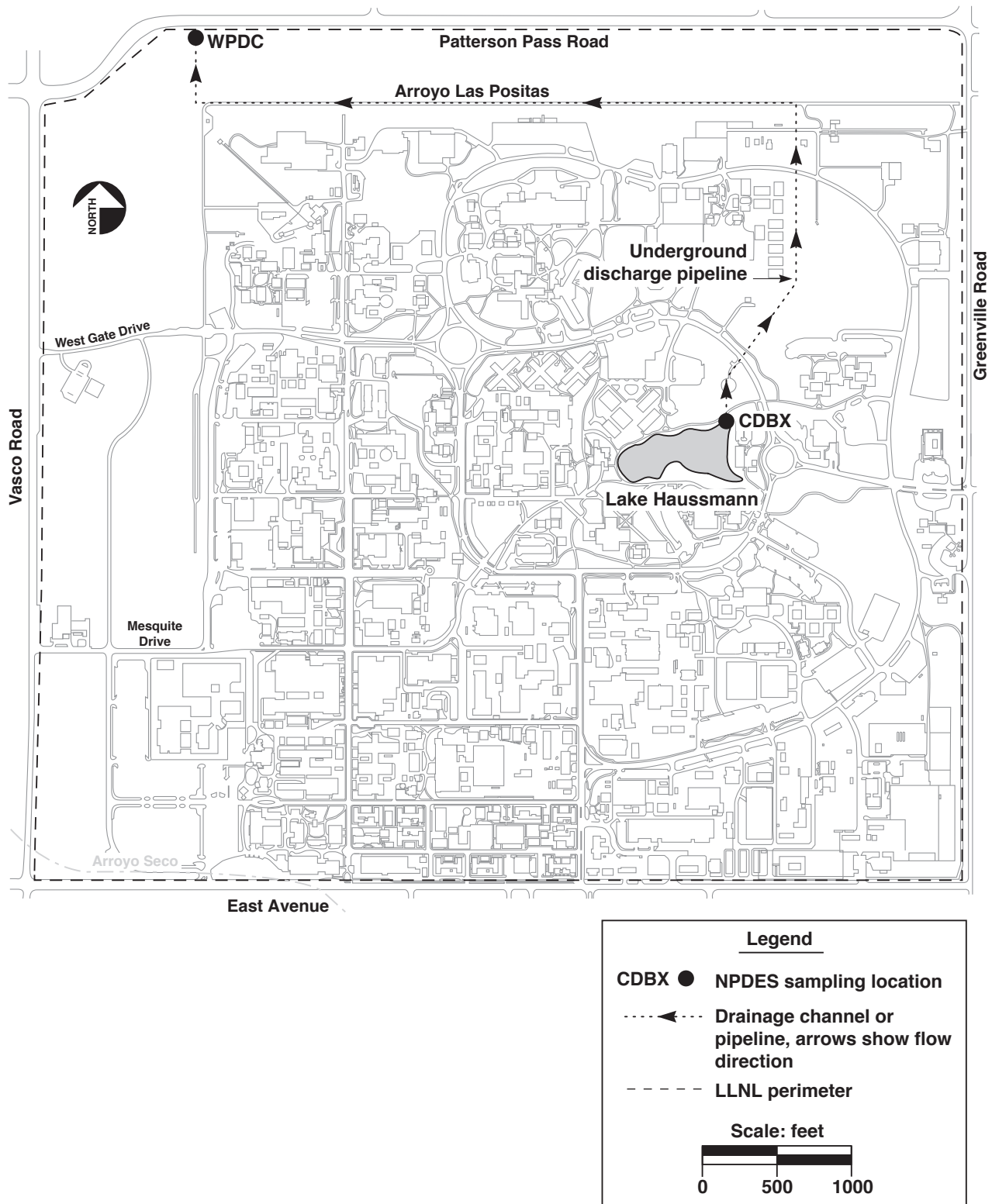
**Table C-1. LLNL Lake Haussmann monitoring data for points CDBX and WPDC, January through March 2011.**

			<b>CDBX 2/16/11</b>	<b>WPDC 2/16/11</b>	<b>Discharge Limits 1-Apr through 30- Nov</b>	<b>Discharge Limits 1-Dec through 30-Mar</b>
<b>Physical</b>						
pH	EPA-150.1	Units	8.47	7.89	not <6.5 or >8.5	not <6.5 or >8.5
Total dissolved solids (TDS)	EPA-160.1	mg/L	510	210	na	na
Total suspended solids (TSS)	EPA-160.2	mg/L	< 1.1	7.3	na	na
<b>Polychlorinated biphenyls</b>						
PCB 1016	E8082A	ug/L	< 0.5	a	na	na
PCB 1221	E8082A	ug/L	< 0.5	a	na	na
PCB 1232	E8082A	ug/L	< 0.5	a	na	na
PCB 1242	E8082A	ug/L	< 0.5	a	na	na
PCB 1248	E8082A	ug/L	< 0.5	a	na	na
PCB 1254	E8082A	ug/L	< 0.5	a	na	na
PCB 1260	E8082A	ug/L	< 0.5	a	na	na
<b>Metals</b>						
Aluminum	EPA-200.7	mg/L	< 0.05	0.6	na	na
Antimony	EPA-200.8	mg/L	< 0.005	< 0.005	0.006	na
Arsenic	EPA-200.8	mg/L	< 0.002	< 0.002	0.05	0.01
Barium	EPA-200.7	mg/L	0.17	0.06	na	na
Beryllium	EPA-210.2	mg/L	< 0.0002	< 0.0002	0.004	na
Boron	EPA-200.7	mg/L	0.82	0.35	na	na
Cadmium	EPA-200.8	mg/L	< 0.0005	0.001	0.005	0.0022
Chromium	EPA-200.8	mg/L	0.0025	0.0046	0.05	na
Cobalt	EPA-200.7	mg/L	< 0.05	< 0.05	na	na
Copper	EPA-200.8	mg/L	< 0.001	0.0037	1.3	0.0236
Hexavalent Chromium	EPA-218.6	mg/L	0.0021	0.0017	na	0.022
Iron	EPA-200.7	mg/L	< 0.1	0.67	na	na
Lead	EPA-200.8	mg/L	< 0.005	< 0.005	0.015	0.0064
Manganese	EPA-200.8	mg/L	< 0.03	< 0.03	0.5	0.5
Mercury	EPA-245.1	mg/L	< 0.0002	< 0.0002	0.002	0.002
Molybdenum	EPA-200.8	mg/L	< 0.025	< 0.025	0.05	na
Nickel	EPA-200.8	mg/L	0.0025	0.0029	0.1	0.32
Selenium	EPA-200.8	mg/L	< 0.002	< 0.002	0.05	0.01
Silver	EPA-200.8	mg/L	< 0.001	< 0.001	0.1	0.0082
Thallium	EPA-200.8	mg/L	< 0.001	< 0.001	0.002	na
Vanadium	EPA-200.7	mg/L	< 0.02	< 0.02	na	na
Zinc	EPA-200.7	mg/L	< 0.02	0.044	na	0.22
<b>Organics<sup>b</sup></b>						
Tetrachloroethene	EPA-601	ug/L	< 0.5	a	4	4
Vinyl chloride	EPA-601	ug/L	< 0.5	a	2	2
<b>Radiological</b>						
Alpha	EPA 900.0	pCi/L	2.03	< 2	na	na
Beta	EPA 900.0	pCi/L	< 3	3.22	na	na
Tritium	EPA 906.0	pCi/L	233	192	20,000	20,000
<b>Herbicides</b>						
Bromacil	EPA-525.2	ug/L	< 0.5	1.8	na	na
Diuron	EPA-632	ug/L	< 1.1	< 1	na	na
Glyphosate	EPA-547	ug/L	< 20	29	na	na
<b>Acute Toxicity</b>						
Aq. Bioassay, Survival	FISHTOX1P	%	a	100	na	70
<b>Chronic Toxicity<sup>c</sup></b>						
Aq. Bioassay, Fathead Growth NOEC	E1000TOX	%	a	100	na	70
Aq. Bioassay, Fathead Survival NOEC	E1000TOX	%	a	100	na	70
<b>Nitrate (as NO3)</b>	EPA-300.0	mg/L	8.7	7	na	na
<b>Chemical Oxygen Demand (COD)</b>	EPA-410.4	mg/L	< 25	29	na	na
<b>Total Organic Carbon (TOC)</b>	SM-5310C	mg/L	3.7	6.1	na	na

a) Sampling for these analytes not required at this location.

b) VOCs reported are the constituents of concern for CDBX and WPDC sampling locations.

c) If survival is <100%, NOEC & LOEC will be reported.



ERD-S3R-08-0041

**Figure C-1. Location of Lake Haussmann showing discharge sampling locations.**

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## **Attachment D**

### **Figures**

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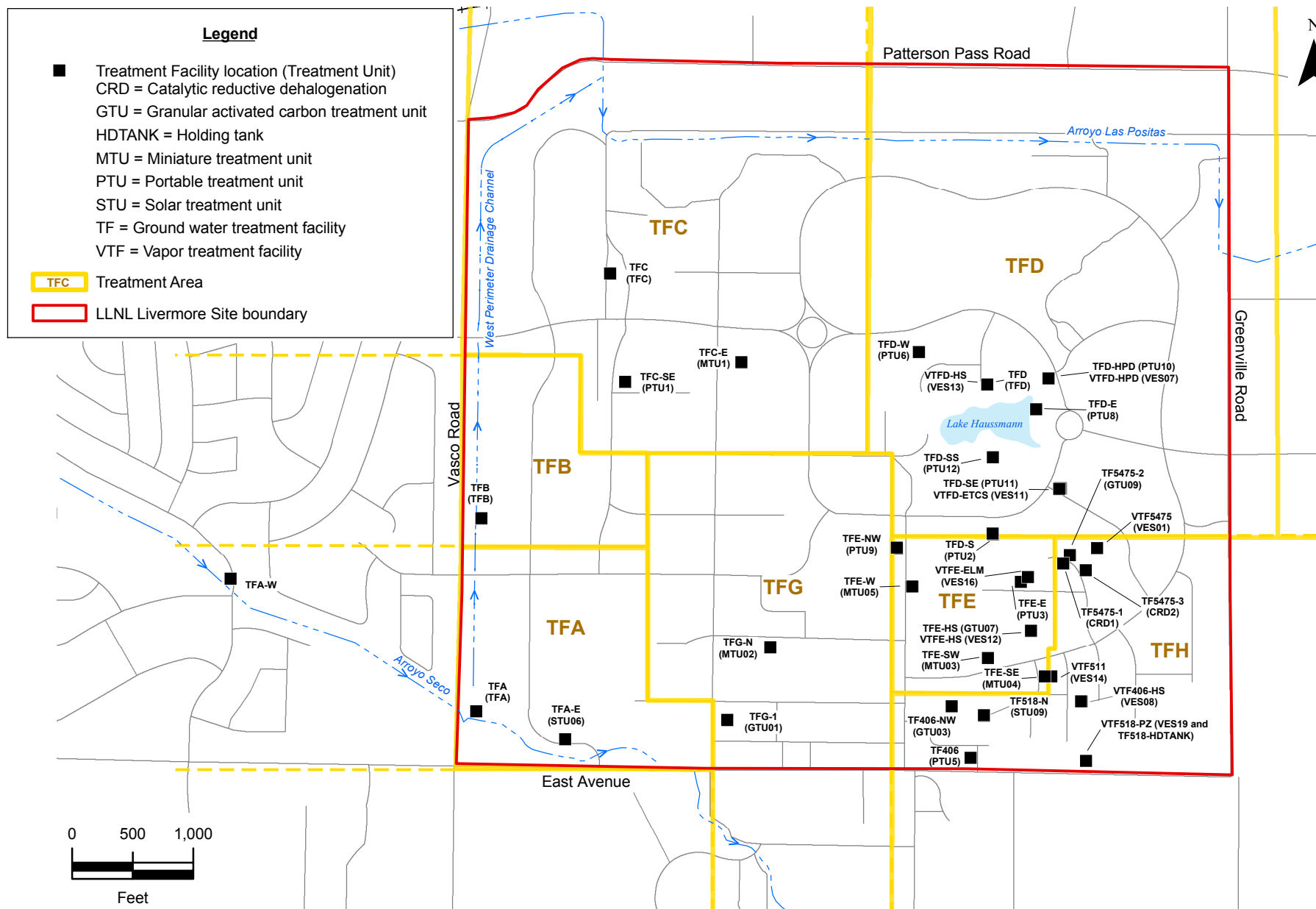
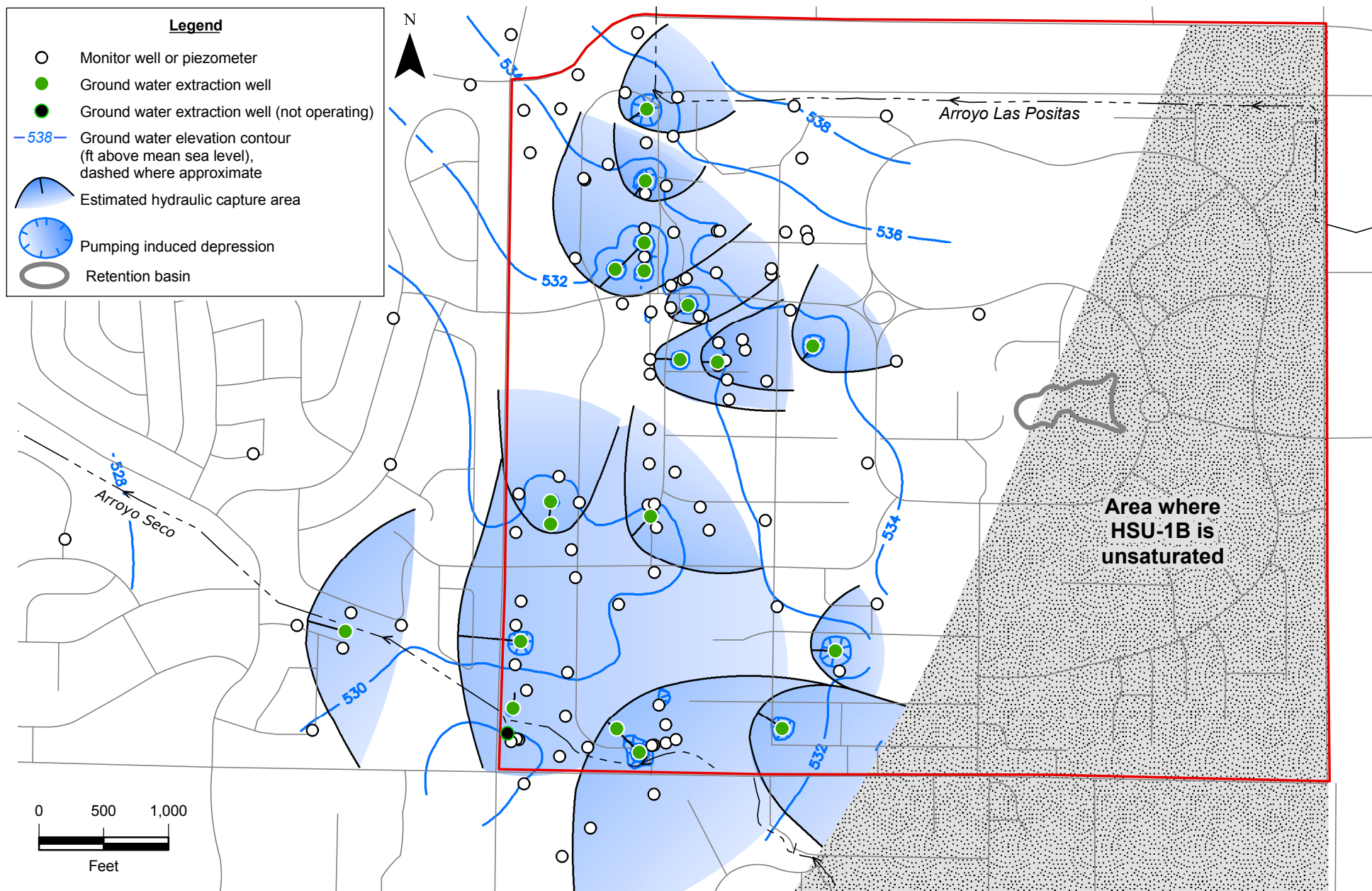
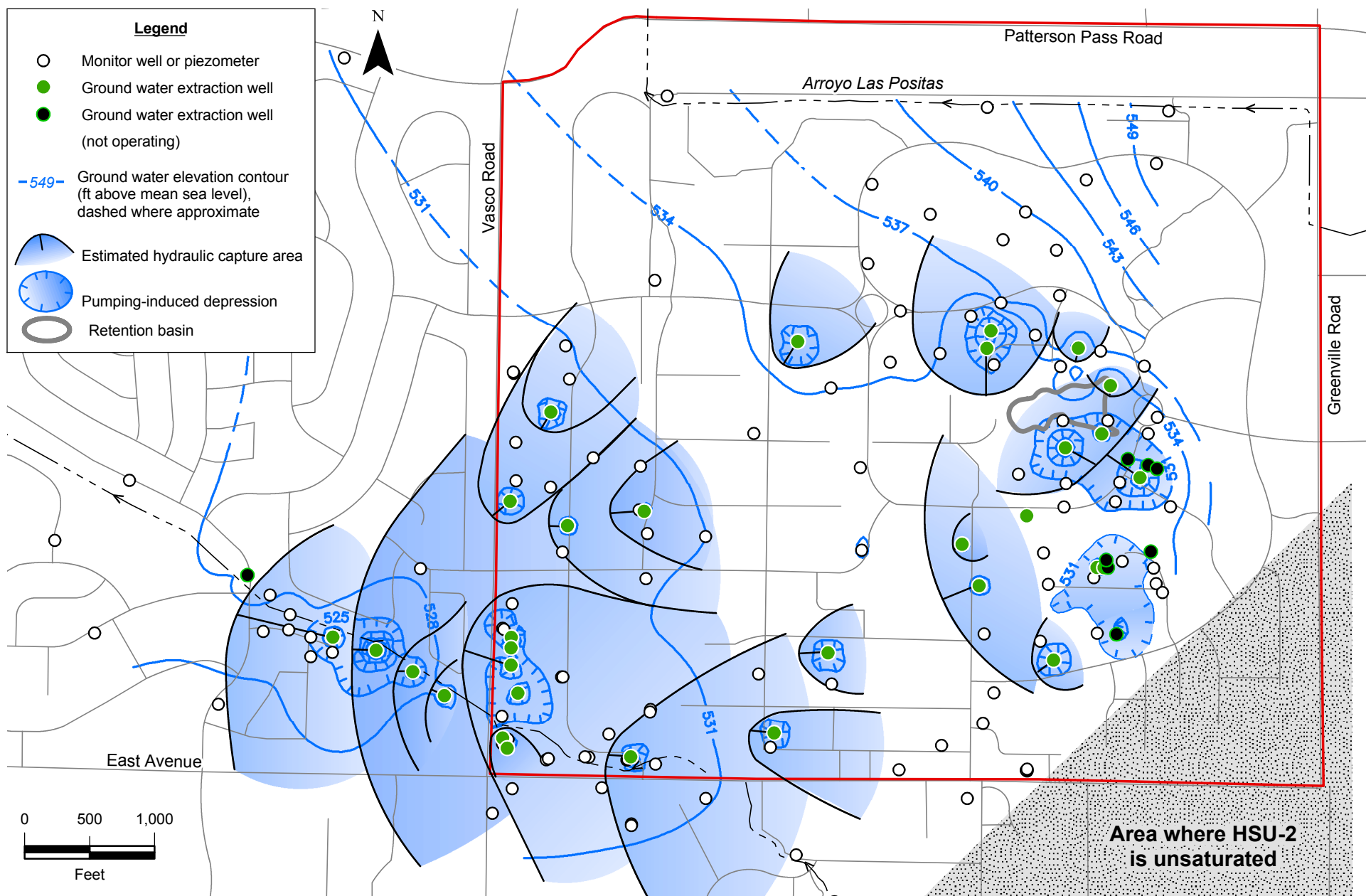


Figure 1. Livermore Site treatment areas and treatment facility locations.

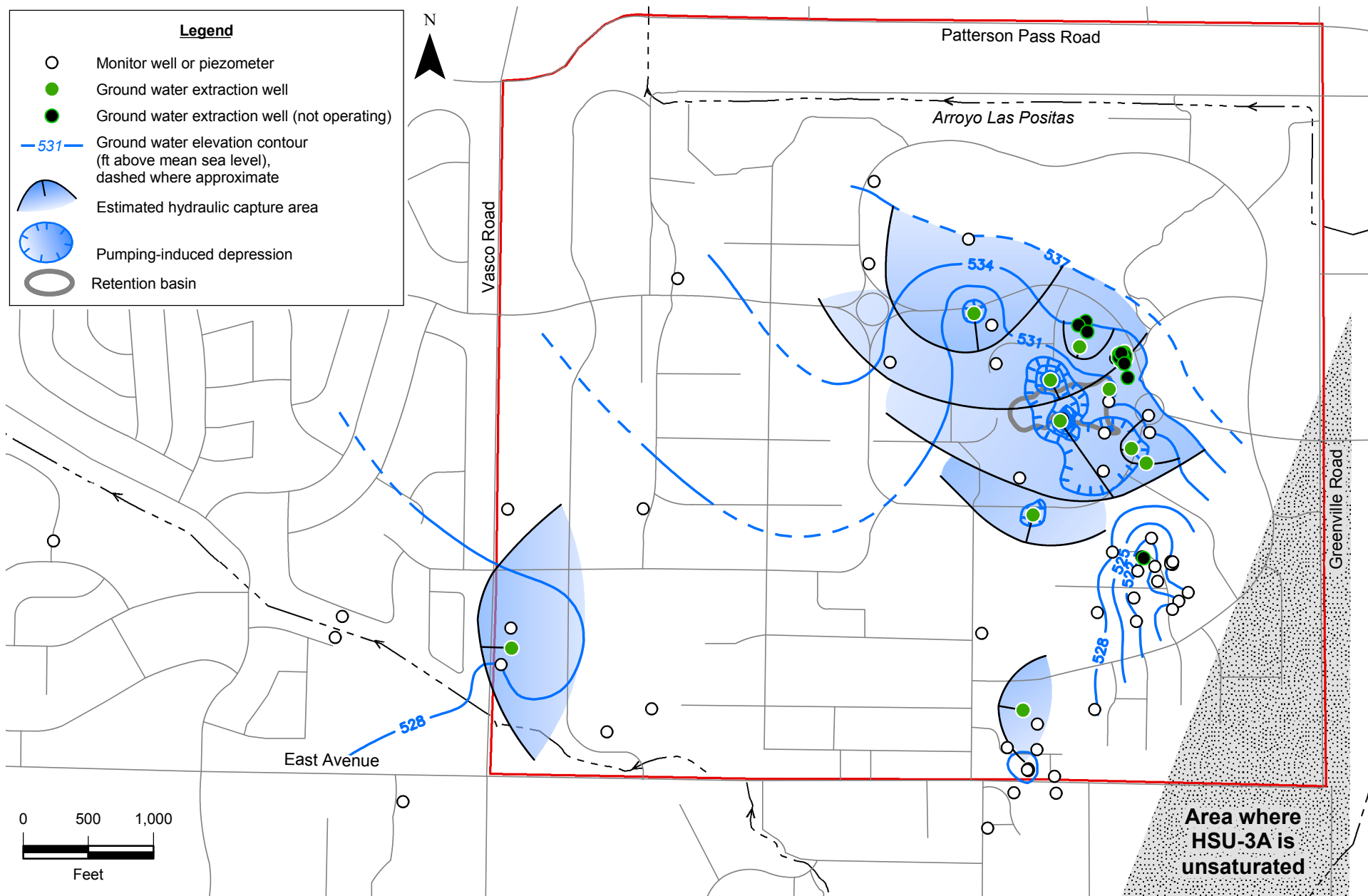


**Figure 2. Ground water elevation contour map based on 128 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.**





**Figure 3. Ground water elevation contour map based on 159 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.**



**Figure 4. Ground water elevation contour map based on 79 wells completed within HSU-3A showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.**

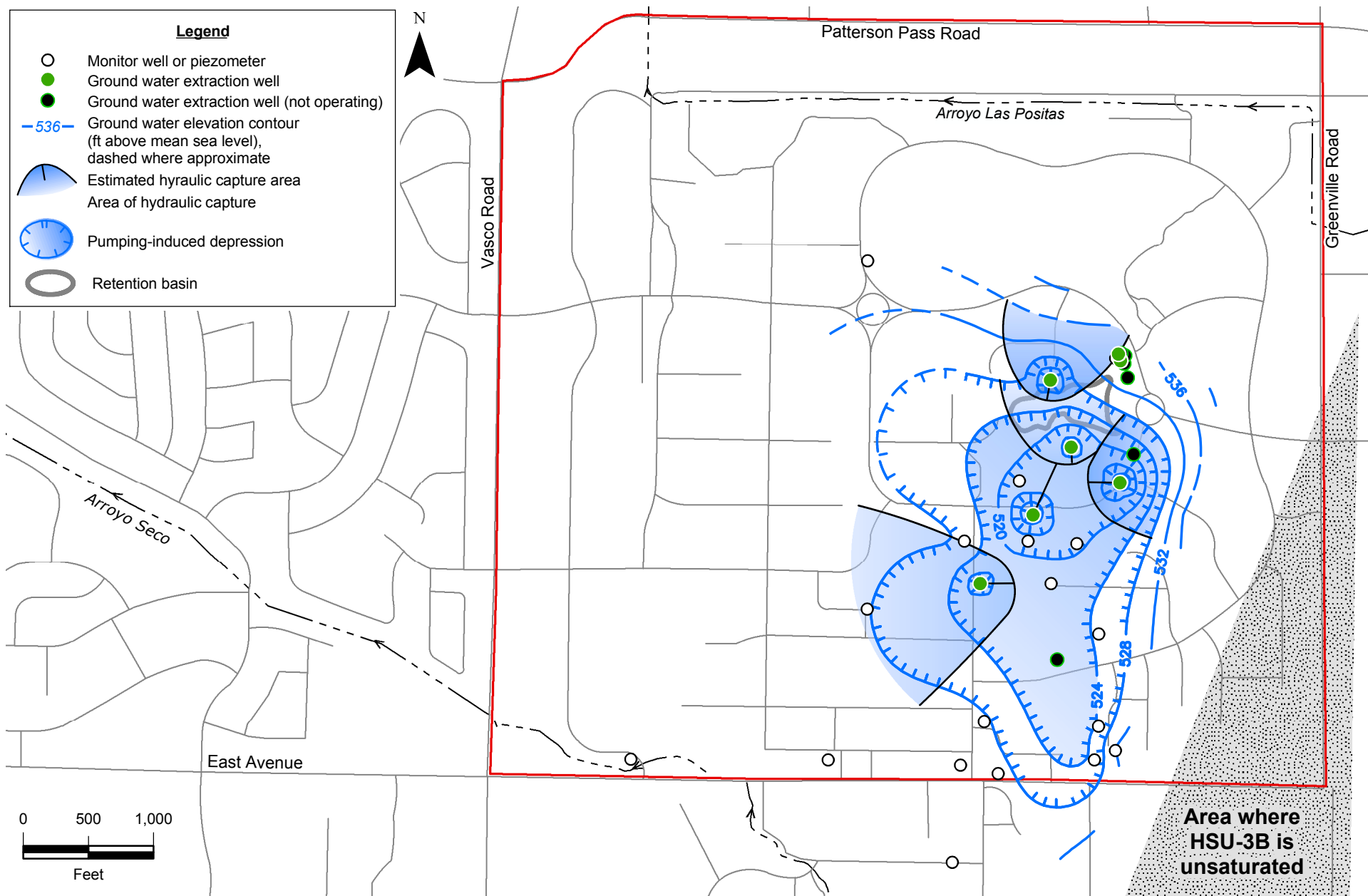


Figure 5. Ground water elevation contour map based on 33 wells completed within HSU-3B showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.

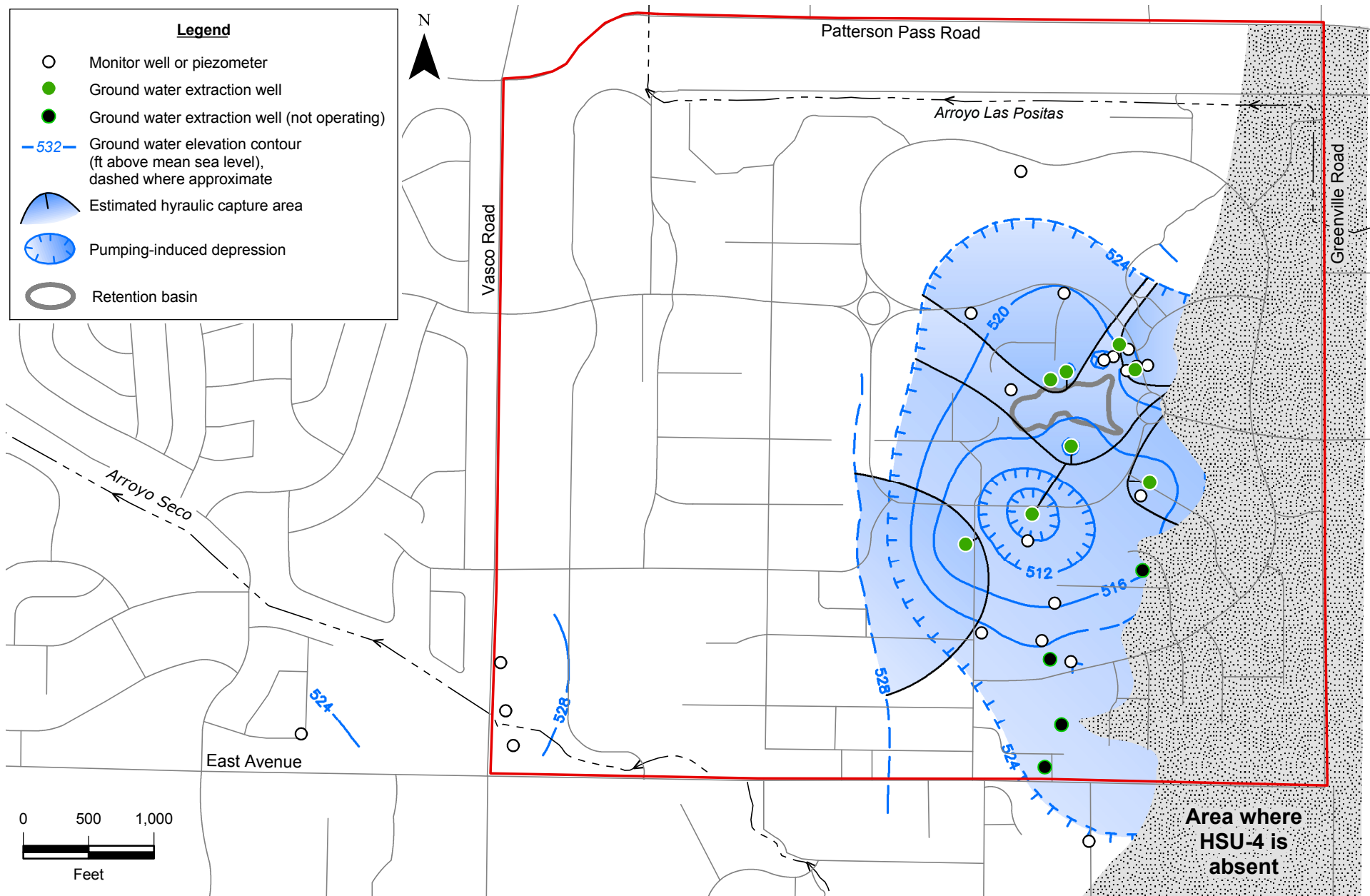


Figure 6. Ground water elevation contour map based on 34 wells completed within HSU-4 showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.

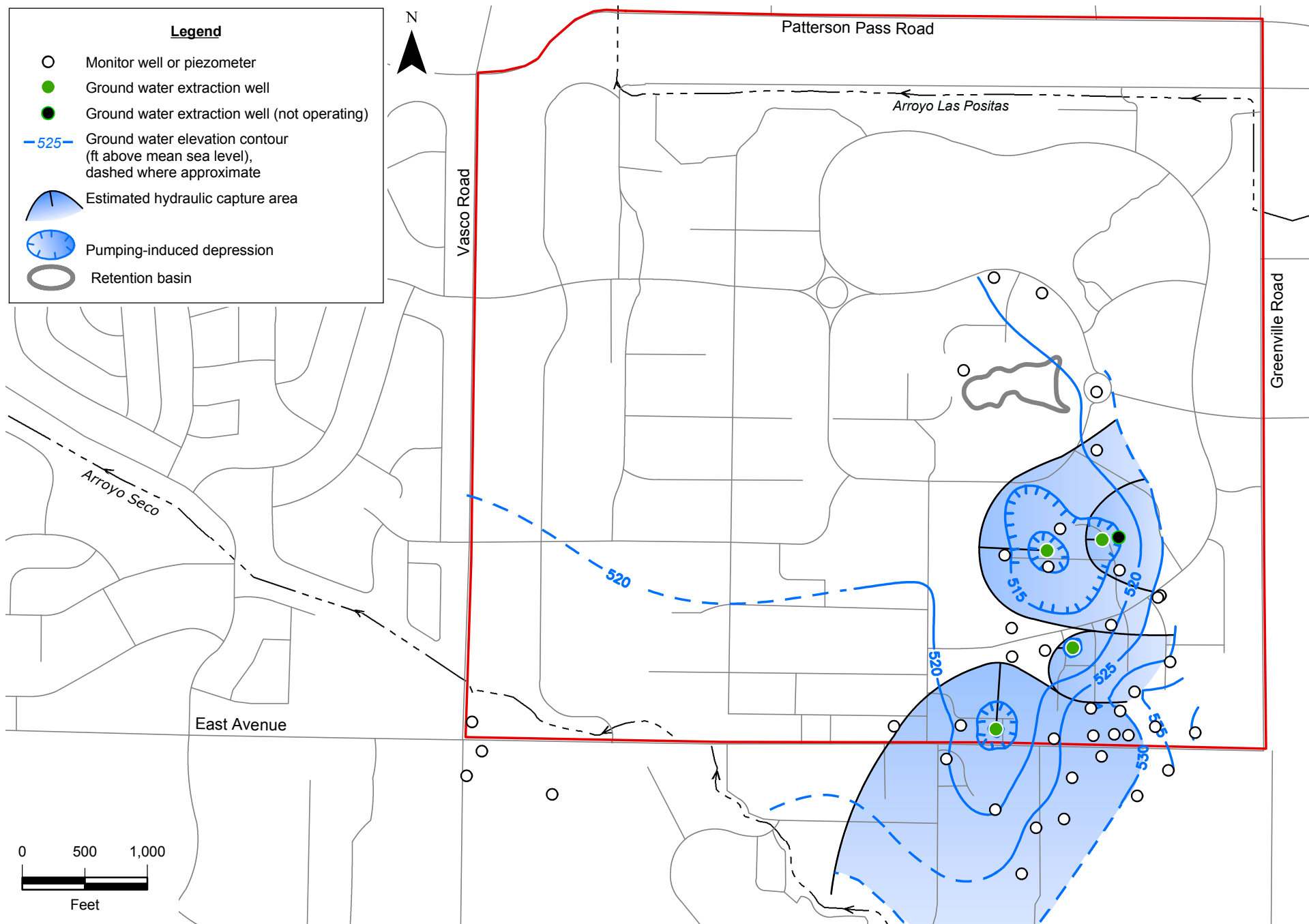


Figure 7. Ground water elevation contour map based on 46 wells completed within HSU-5 showing estimated hydraulic capture areas, LLNL and vicinity, first quarter 2011.